Service
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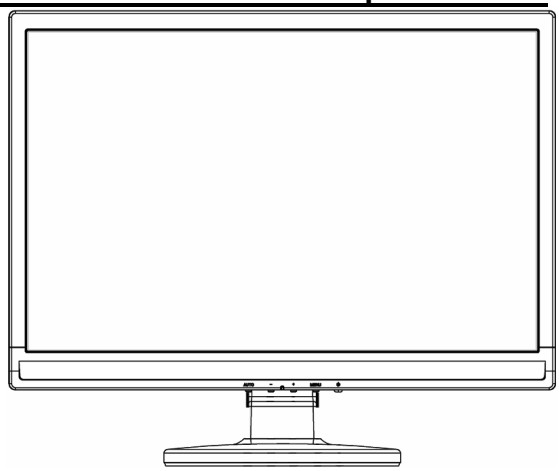


Service Manual

Horizontal Frequency
30kHz – 83kHz

TABLE OF CONTENTS

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Revision	Date	Revision History	TPV Model
A00	Feb.-26-09	Initial Release	T98SM5NBX2KPAN

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, AOC Company will be referred to as AOC.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design.

Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:

DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.

CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit

-Must mount the module using mounting holes arranged in four corners.

-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.

-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.

-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).

-Make certain that treatment person’s body is grounded through wristband.

-Do not leave the module in high temperature and in areas of high humidity for a long time.

-Avoid contact with water as it may a short circuit within the module.

-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

1. Monitor Specifications

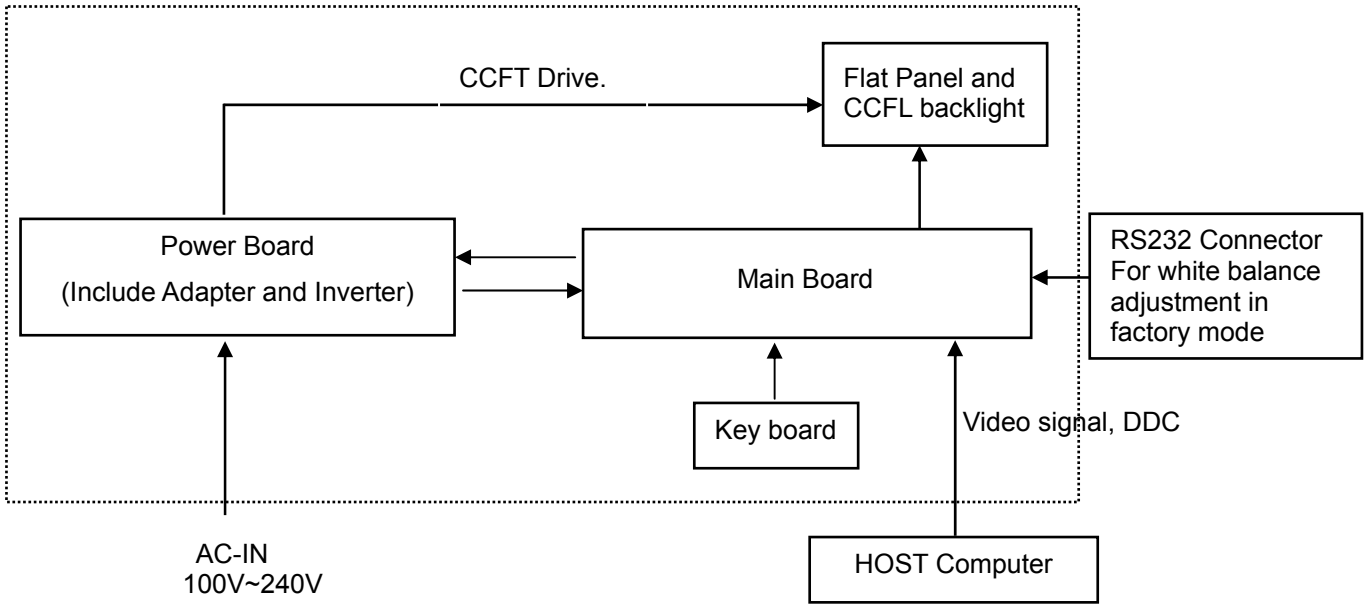
LCD Panel	Driving system	19" TFT Color LCD
	Viewable Image Size	481mm diagonal
	Pixel pitch	0.2835mm(H) × 0.2835mm(V)
Input	Video	R,G,B Analog Interface
	Separate Sync.	H/V TTL
	H-Frequency	30kHz – 83kHz
	V-Frequency	55-75Hz
Display Colors		16.7M Colors
Dot Clock		135MHz
Max. Resolution		1440 × 900 @60Hz
Plug & Play		VESA DDC 2BTM
EPA ENERGYSTAR®	ON Mode	≤37W
	OFF Mode	≤1W
Input Connector		15-pin D-Sub
Input Video Signal		Analog:0.7Vp-p(standard), 75 OHM, Positive
Maximum Screen Size		Horizontal : 408mm Vertical : 255mm
Power Source		100~240VAC,50~60Hz
Environmental Considerations		Operating Temp: 0° to 40°C Storage Temp.: -20° to 60°C Operating Humidity : 10% to 85%
Dimension		439.02×365.09×190 (W ×H×D)mm
Weight (N. W.)		3.70kg Unit (net)
External Controls:	Switch	Power Key;MENU;+/volume;-/volume;Auto / Exit
	Functions	Luminance
		Image Setup;Color Temp.;Color Boost
		Picture Boost
		OSD Setup;Extra
Power Consumption	(Maximum)	37 Watts
Regulatory Compliance		CE

2. LCD Monitor Description

The LCD monitor will contain a main board, a power board and a key board which house the flat panel control logic, brightness control logic and DDC.

The power board will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.

Monitor Block Diagram



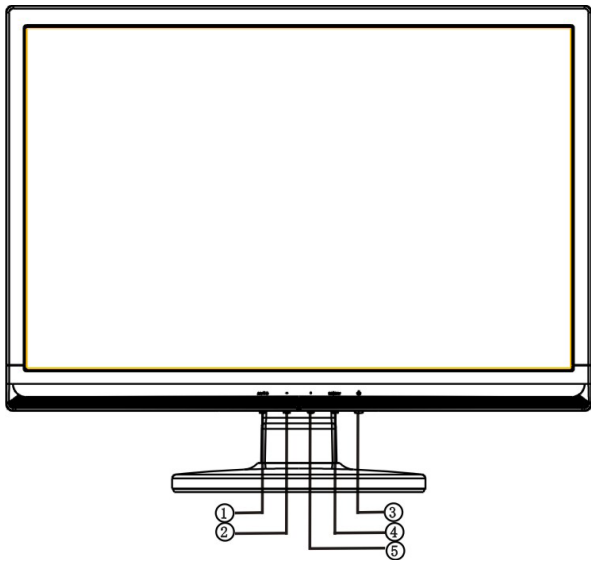
3. Operating Instructions

General Instructions

Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.

3.1 Control Buttons



External Control Button

1.	Auto	2.	- (left)
3.	Power Key	4.	MENU
5.	+(right)		

Front Panel Control

- **Power Button:**

Press this button to switch ON/OFF of monitor's power.

- **MENU / ENTER:**

Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Brightness/ Contrast Adjust OSD status.

- **- /Volume:**

Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **+ /Volume:**

Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **Auto Adjust button / Exit:**

1. When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).

2. When OSD menu is in off status, press this button over 2 seconds to activate the Auto Adjustment function. The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

- **Power Indicator:**

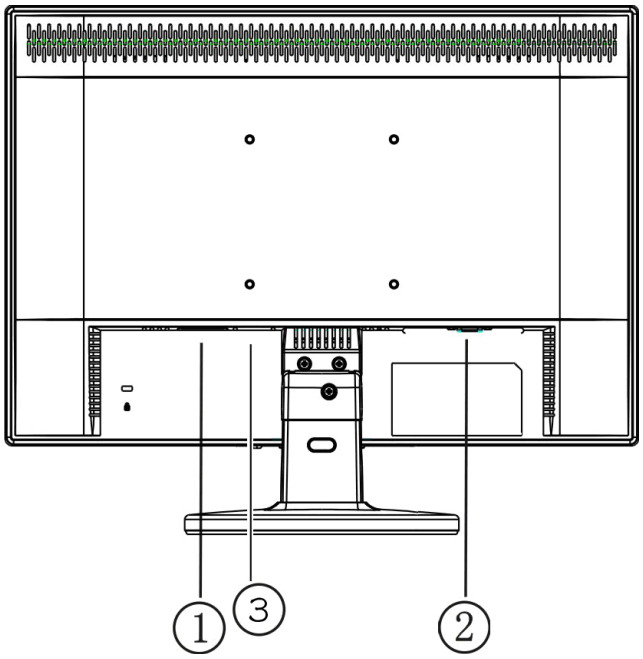
Green — Power On mode.

Orange — Off mode.

OSD Lock Function: To lock the OSD, press and hold the MENU button while the monitor is off and then press power button to turn the monitor on. To un-lock the OSD - press and hold the MENU button while the monitor is off and then press power button to turn the monitor on.

3.2 Attaching the Cables

Cable Connections On Back of Monitor



Connecting Cables

1.	Power Cord
2.	Signal Cable
3.	Audio Cable

Connecting the Power Cord: Connect the power cord into your LCD monitor's power input socket, and then plug the other end into a 3-pin AC power outlet. The power cord may be connected to either a wall power outlet or the power outlet socket on your PC, depending on the type of power cord supplied with your LCD monitor.

Connecting the D-Sub Cable: Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.

Connecting the Audio Cable: Connect the audio cable between the monitor's audio input and the PC's audio output.

Caution: If the AC outlet is not grounded (with three holes), install the proper grounding adapter (not supplied).

3.3 Adjusting the Picture

1. Press the MENU-button to activate the OSD window.
2. Press - or + to navigate through the functions. Once the desired function is highlighted, press the MENU-button to activate it. If the function selected has a sub-menu, press - or + again to navigate through the sub-menu functions. Once the desired function is highlighted, press MENU-button to activate it.
3. Press - or + to change the settings of the selected function.
4. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-3.

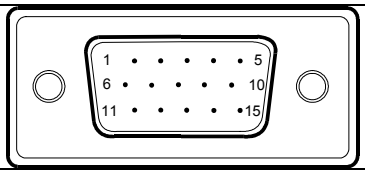
The OSD Message

Main Menu Item	Main Menu Icon	Sub Menu Item	Sub Menu	Description
Luminance		Brightness		Backlight Adjustment
		Contrast		Contrast from Digital-register.
		Eco	Standard	Standard Mode
			Text	Text Mode
			Internet	Internet Mode
			Game	Game Mode
			Movie	Movie Mode
			Sports	Sports Mode
		Gamma	Gamma1	Adjust to Gamma 1
			Gamma2	Adjust to Gamma 2
			Gamma3	Adjust to Gamma 3
		DCR	Off	Disable dynamic contrast ratio
			On	Enable dynamic contrast ratio
Image Setup		Clock		Adjust picture Clock to reduce Vertical-Line noise.
		Focus		Adjust Picture Phase to reduce Horizontal-Line noise
		H. Position		Adjust the vertical position of the picture.
		V. Position		Adjust the horizontal position of the picture.

Main Menu Item	Main Menu Icon	Sub Menu Item	Sub Menu	Description
Color Temp.		Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
		Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User	User-B	Blue Gain from Digital-register
			User-G	Green Gain from Digital-register.
			User-R	Red Gain from Digital-register
			User-Y	Yellow Gain from Digital-register
			User-C	Cyan Gain from Digital-register
			User-M	Magenta Gain from Digital-register
Color Boost		Full Enhance	on or off	Disable or Enable Full Enhance Mode
		Nature Skin	on or off	Disable or Enable Nature Skin Mode
		Green Field	on or off	Disable or Enable Green Field Mode
		Sky-blue	on or off	Disable or Enable Sky-blue Mode
		AutoDetect	on or off	Disable or Enable AutoDetect Mode
		Demo	on or off	Disable or Enable Demo
Picture Boost		Frame Size		Adjust Frame Size
		Brightness		Adjust Frame Brightness
		Contrast		Adjust Frame Contrast
		Hue		Adjust Frame Hue
		Saturation		Adjust Frame Saturation
		Position		Adjust Frame Position
		Bright Frame	on or off	Disable or Enable Bright Frame
OSD Setup		H. Position		Adjust the vertical position of OSD
		V. Position		Adjust the horizontal position of OSD
		Timeout		Adjust the OSD Timeout
		Language		Select the OSD language
Extra		Auto Config		Auto adjust the picture to default
		DDC/CI		Turn ON/OFF DDC/CI Support
		Reset	yes or no	Reset the menu to default
		Information		Show the information of the main image and sub-image source

4. Input/Output Specification

4.1 Input Signal Connector

Pin No.	Description	Pin No.	Description
1.	Red	9.	+5V
2.	Green	10.	Ground
3.	Blue	11.	Ground
4.	Ground	12.	DDC-Serial Data
5.	Detect Cable	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		
15 - Pin Color Display Signal Cable			
			

4.2 Factory Preset Display Modes

Standard	Resolution	Horizontal Frequency	Vertical Frequency
Dos-mode	720 × 400	31.47kHz	70.0Hz
VGA	640 × 480	31.47kHz	60.0Hz
	640 × 480	37.86kHz	72.8Hz
	640 × 480	37.50kHz	75.0Hz
SVGA	800 × 600	37.879kHz	60.0Hz
	800 × 600	48.077kHz	72.2Hz
	800 × 600	46.875kHz	75.0Hz
XGA	1024 × 768	48.363kHz	60.0Hz
	1024 × 768	56.476kHz	70.0Hz
	1024 × 768	60.021kHz	75.0Hz
SXGA	1152×864	67.5kHz	75Hz
	1280 × 1024	64.000kHz	60.0Hz
	1280 × 1024	80.000kHz	75.0Hz
WXGA+	1440 × 900	55.93kHz	60Hz
	1440 × 900	70.635kHz	75Hz

4.3 Panel Specification

LTM190M2-L31 is a color active matrix liquid crystal display(LCD) that uses amorphous silicon TFT(Thin Film Transistor) as switching components. This model is composed of a TFT LCD panel, a driver circuit and a back light unit. The resolution of a 19.0” is 1440x900 and this model can display up to 16.7 million colors.

4.3.1 General Specifications

Items	Specification	Unit
Pixel Pitch	0.2835(H) x 0.2835(W)	mm
Active Display Area	408.24(H) x 255.15(V)	mm
Surface Treatment	Haze 25%, Hard-coating(3H)	
Display Colors	16.7M (6bit Hi-FRC)	colors
Number of Pixels	1440 x 900	pixel
Pixel Arrangement	RGB vertical stripe	
Display Mode	Normally White	
Power Consumption	24.6 Watt (Typ.)	
Luminance of White	300(Typ.)	cd/㎡

4.3.2 Optical Characteristics

The optical characteristics should be measured in a dark room or equivalent.
Measuring equipment : TOPCON RD-80S,SPECTRORADIOMETER SR-3

(Ta = 25 ± 2°C, VDD=5V, fv= 60Hz, fDCLK=51.9MHz, IL = 6.5mArms)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Contrast Ratio (Center of screen)		C/R		600	1000	-	
Response Time	Rising	Tr		-	1.3	4	msec
	Falling	Tf		-	3.7	6	msec
Luminance of White (Center of screen)		Y_L		250	300	-	cd/m2
Color Chromaticity (CIE 1931)	Red	Rx	Normal $\theta_{L,R}=0$ $\theta_{U,D}=0$ Viewing Angle	0.610	0.640	0.670	
		Ry		0.300	0.329	0.360	
	Green	Gx		0.270	0.300	0.330	
		Gy		0.570	0.600	0.630	
	Blue	Bx		0.120	0.150	0.180	
		By		0.030	0.060	0.090	
	White	Wx		0.283	0.313	0.343	
		Wy		0.299	0.329	0.359	
Color Chromaticity (CIE 1976)	Red	Ru'		-	0.451	-	
		Rv'		-	0.523	-	
	Green	Gu'		-	0.125	-	
		Gv'		-	0.563	-	
	Blue	Bu'		-	0.175	-	
		Bv'		-	0.158	-	
	White	Wu'		-	0.198	-	
		Wv'		-	0.468	-	
C.G.L	White	△u'v'		-	0.011	0.02	

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Gamut		-		-	72	-	%
Color Temperature		-		-	6500	-	K
Viewing Angle	Hor.	θ_L	CR≥10(5)	70(80)	80(89)	-	Degrees
		θ_R		70(80)	80(89)	-	
	Ver.	θ_U		70(80)	80(89)	-	
		θ_D		70(80)	80(89)	-	
Brightness Uniformity (9 Points)		B_{uni}		-	-	25	%

4.3.3 Electrical Characteristics

TFT LCD Module

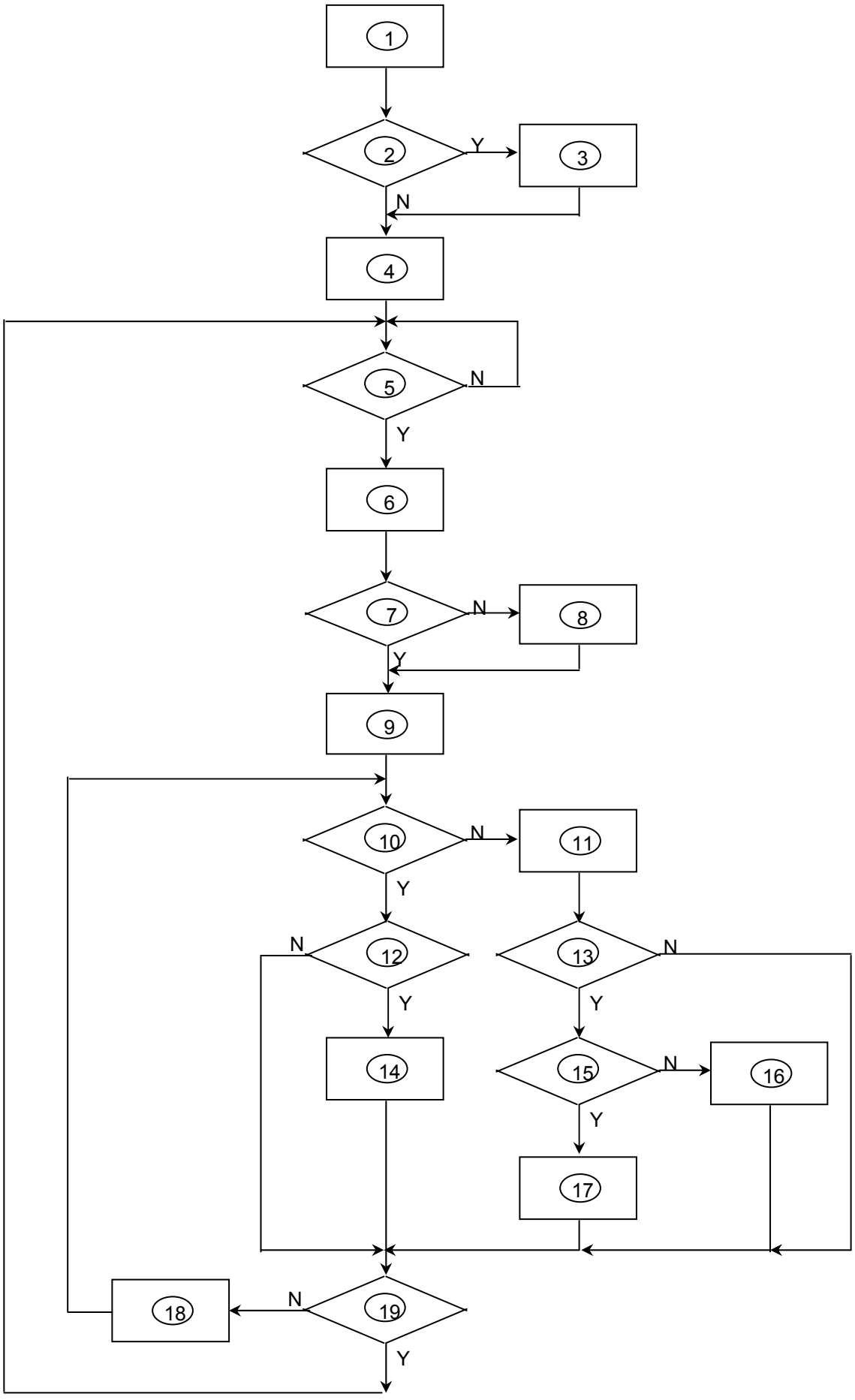
Item		Symbol	Min.	Typ.	Max.	Unit
Voltage of Power Supply		V_{DD}	4.5	5.0	5.5	V
LVDS Input Characteristics	Differential Input Voltage for LVDS Receiver Threshold	High	-	-	+100	mV
		Low	-100	-	-	mV
	LVDS skew	t_{SKEW}	-300		300	
	Differential input voltage	$\|V_{ID}\|$	200		600	mV
	Input voltage range (single-ended)	V_{IN}	0		2.4	V
	Common mode voltage	V_{CM}	0+ $\|V_{ID}\|/2$	1.2	2.4- $\|V_{ID}\|/2$	V
Current of Power Supply	(a) Black	I_{DD}	-	1100	1300	mA
	(b) White		-	800	-	mA
	(c) Dot		-	1200	1600	mA
Vsync Frequency		f_V	56	60	76	Hz
Hsync Frequency		f_H	52.6	56.4	71.4	kHz
Main Frequency		f_{DCLK}	48.4	51.9	65.7	MHz
Rush Current		I_{RUSH}	-	-	3	A

Back Light Unit

Item		Symbol	Min.	Typ.	Max.	Unit
Lamp Current		I_L	3.0	6.5	8.0	mArms
Lamp Voltage		V_L	-	715	-	Vrms
Lamp Frequency		f_L	40	-	60	kHz
Operating Life Time		Hr	50,000	-	-	Hour
Inverter waveform	Asymmetry rate	Wasy	-	-	10	%
	Distortion rate	Wdis	1.2726	1.414	1.5554	
Startup Voltage		Vs	-	-	0℃ : 1,480 25℃: 1,170	Vrms

5. Block Diagram

5.1 Software Flow Chart

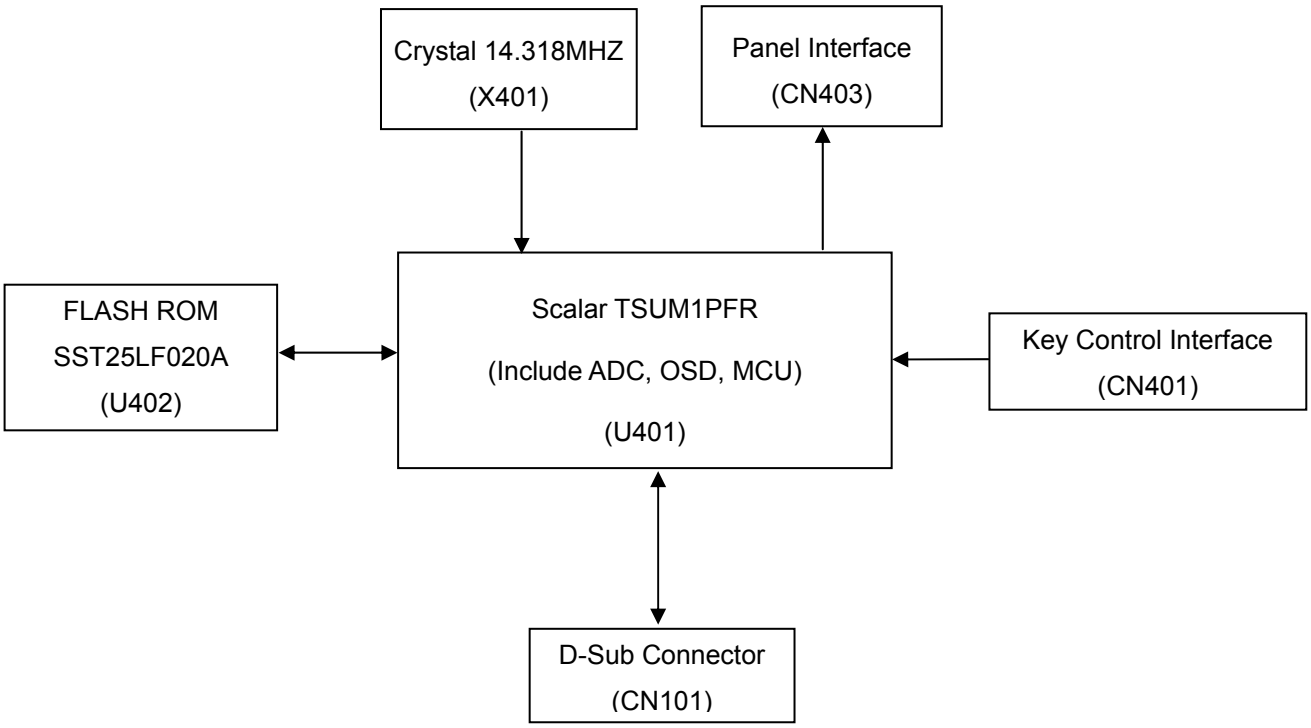


REMARK:

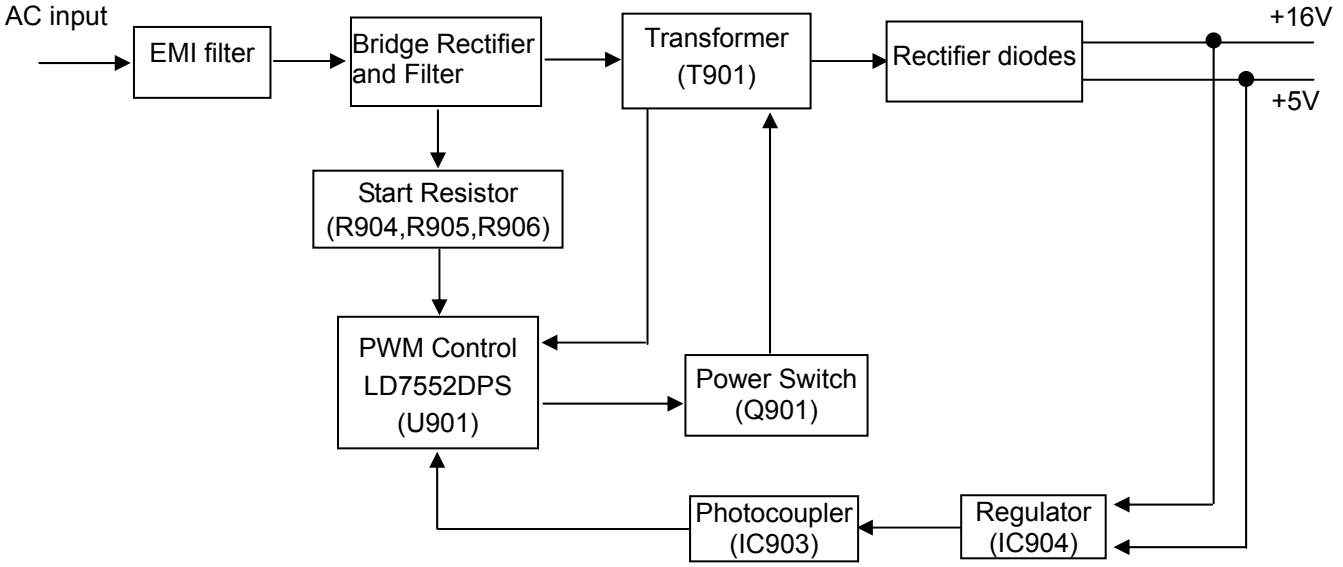
1) MCU initializes.
2) Is the EPROM blank?
3) Program the EPROM by default values.
4) Get the PWM value of brightness from EPROM.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EPROM.
   Turn on the LED and set it to green color.
   Scalar initializes.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are there any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappears.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

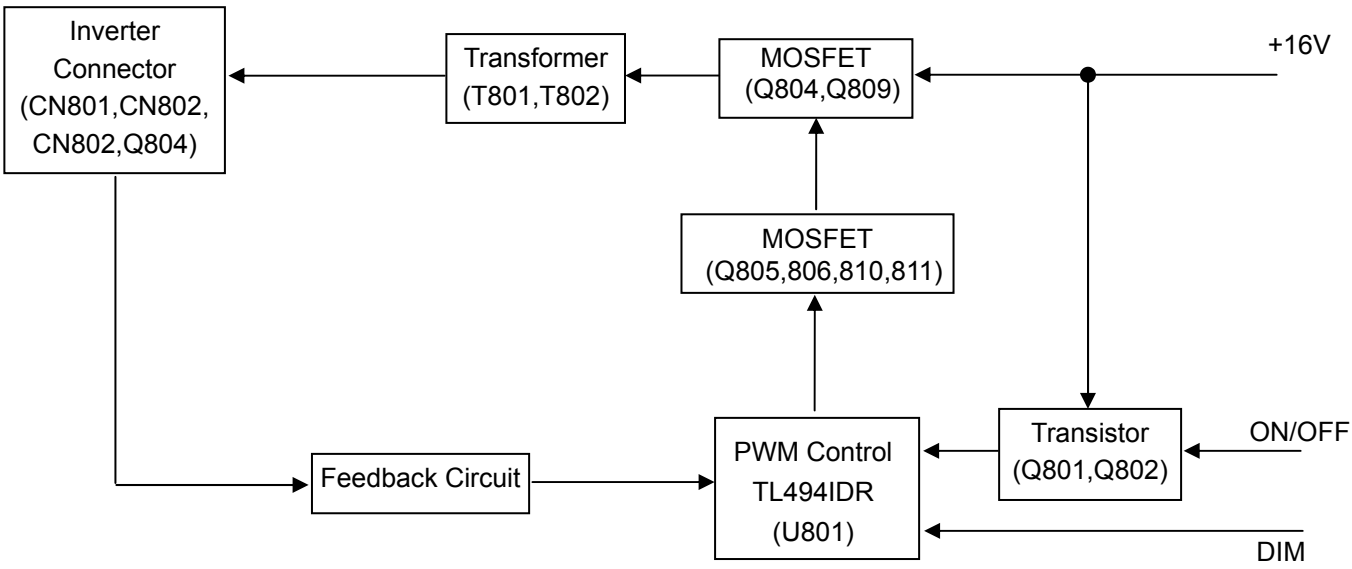
5.2 Electrical Block Diagram

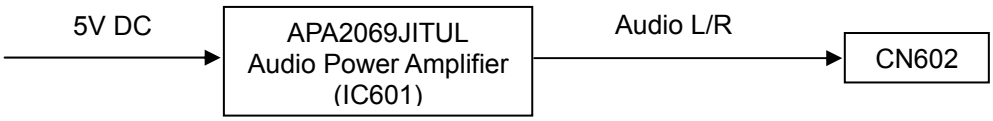
5.2.1 Main Board



5.2.2 Power Board





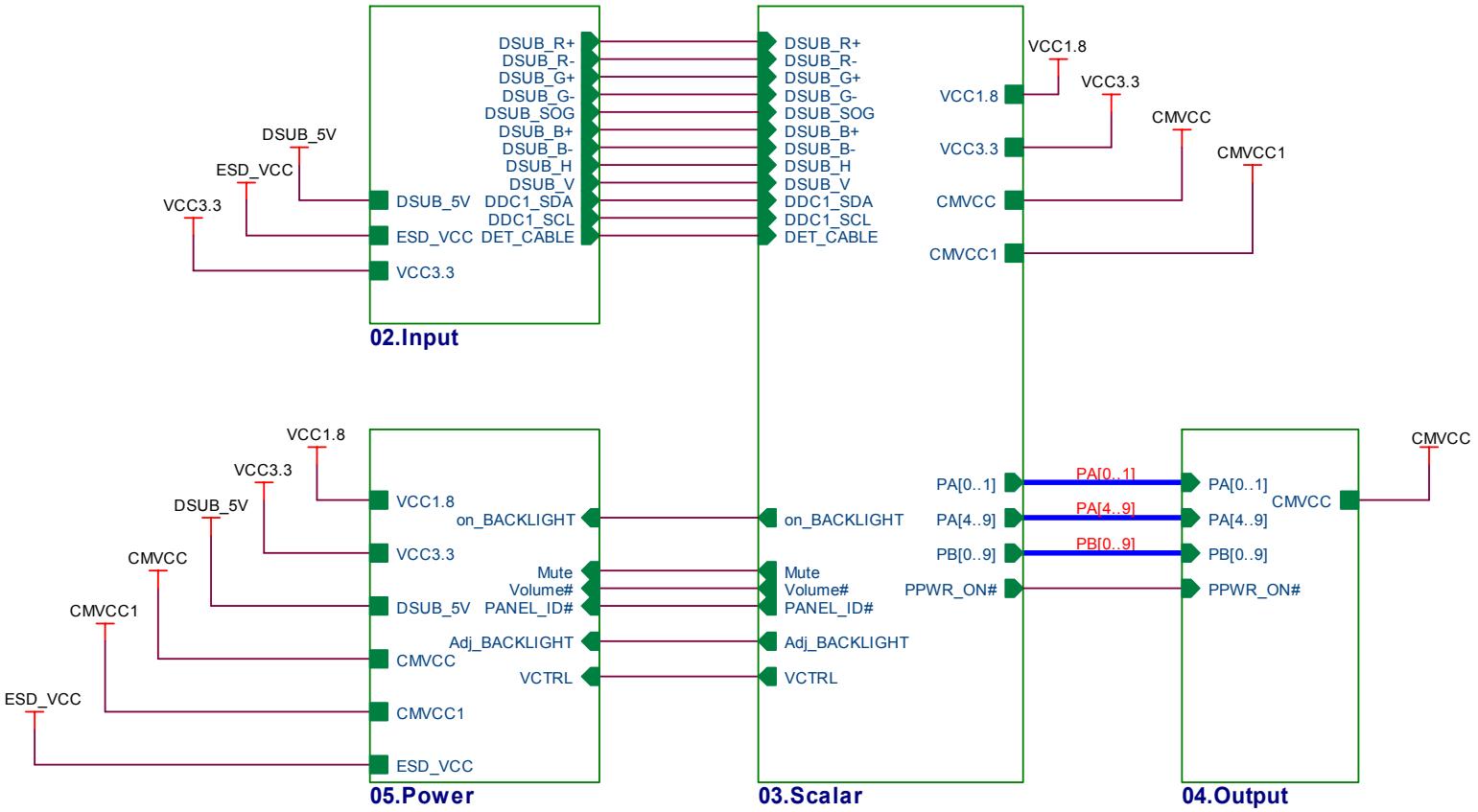


6. Schematic

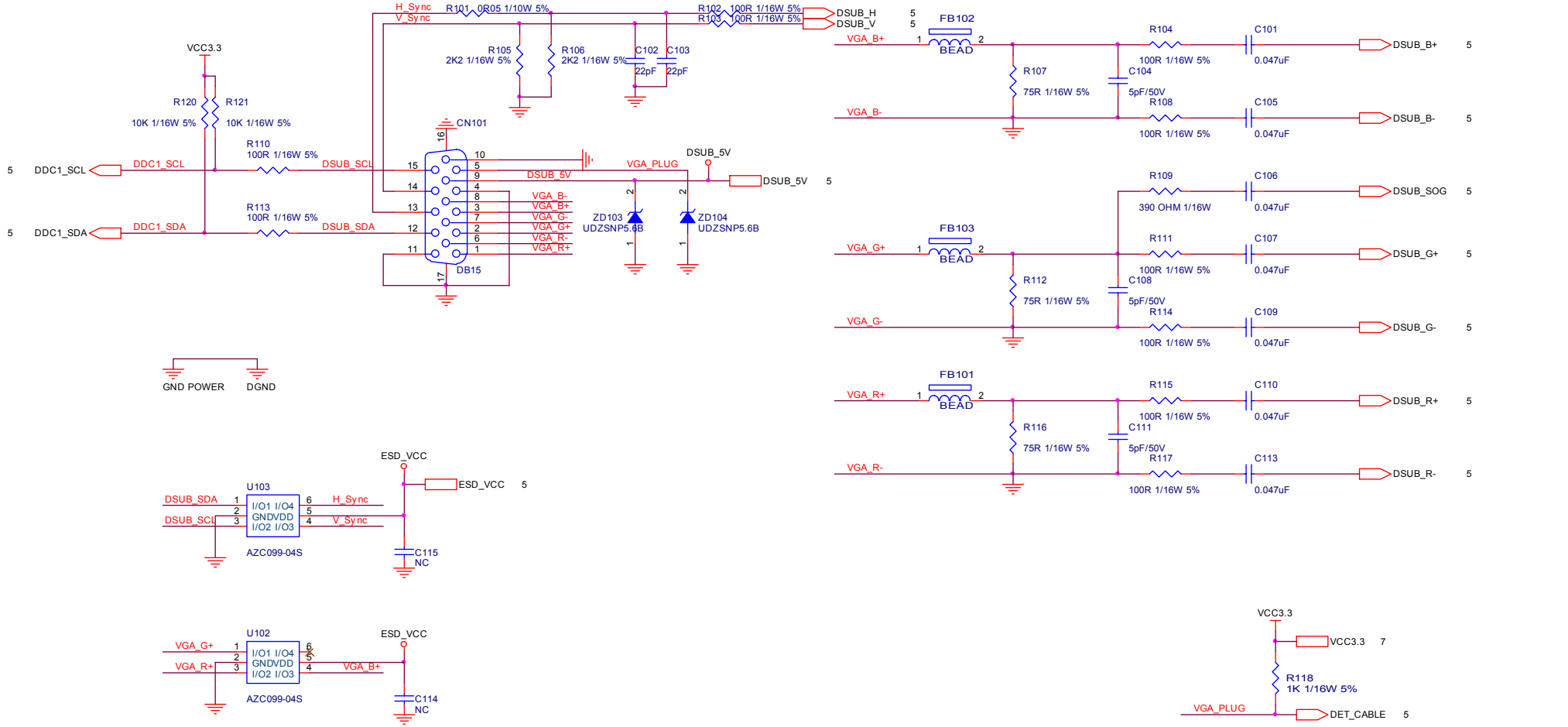
6.1 Main Board 715G2904 1

TSUM1PFR SCHEMATIC

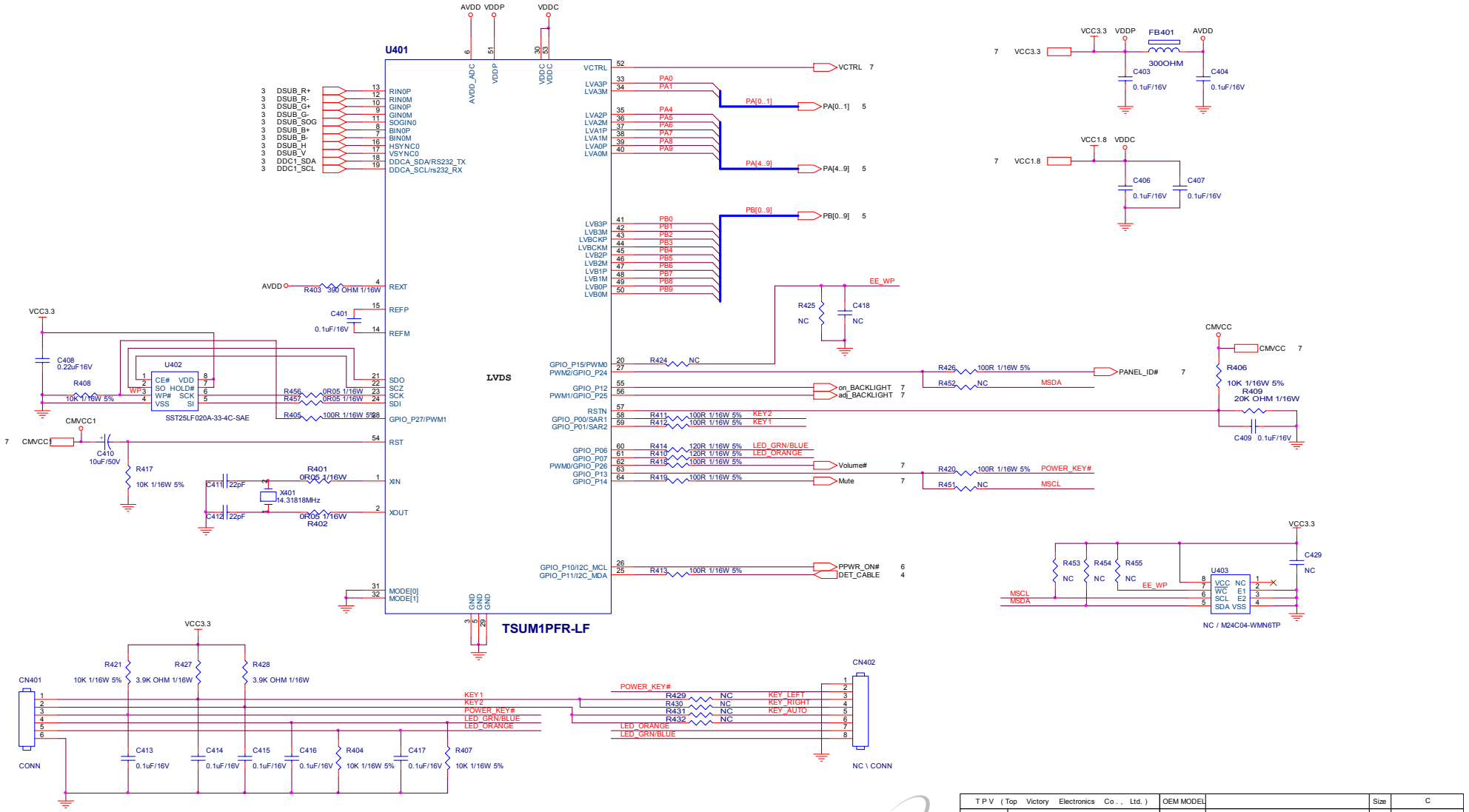
XGA/SXGA LVDS OUTPUT



T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	A
結 隔 瓜 細 腹	RDG2904-1-X-1-080530	TPV MODEL		Rev	1.3
Key Component	01.Top	PCB NAME	715G2904-1	称爹	
Date	Friday, May 30, 2008	Sheet	1 of 7		



T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	B
結隔瓜綱腹		TPV MODEL		Rev	1
Key Component	02.Input	PCB NAME	715G2904-1	称爹	<称爹>
Date	Thursday, April 24, 2008	Sheet	4 of 7		



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL		Size	C
結 陽 瓜 旗 服		TPV MODEL		Rev	1
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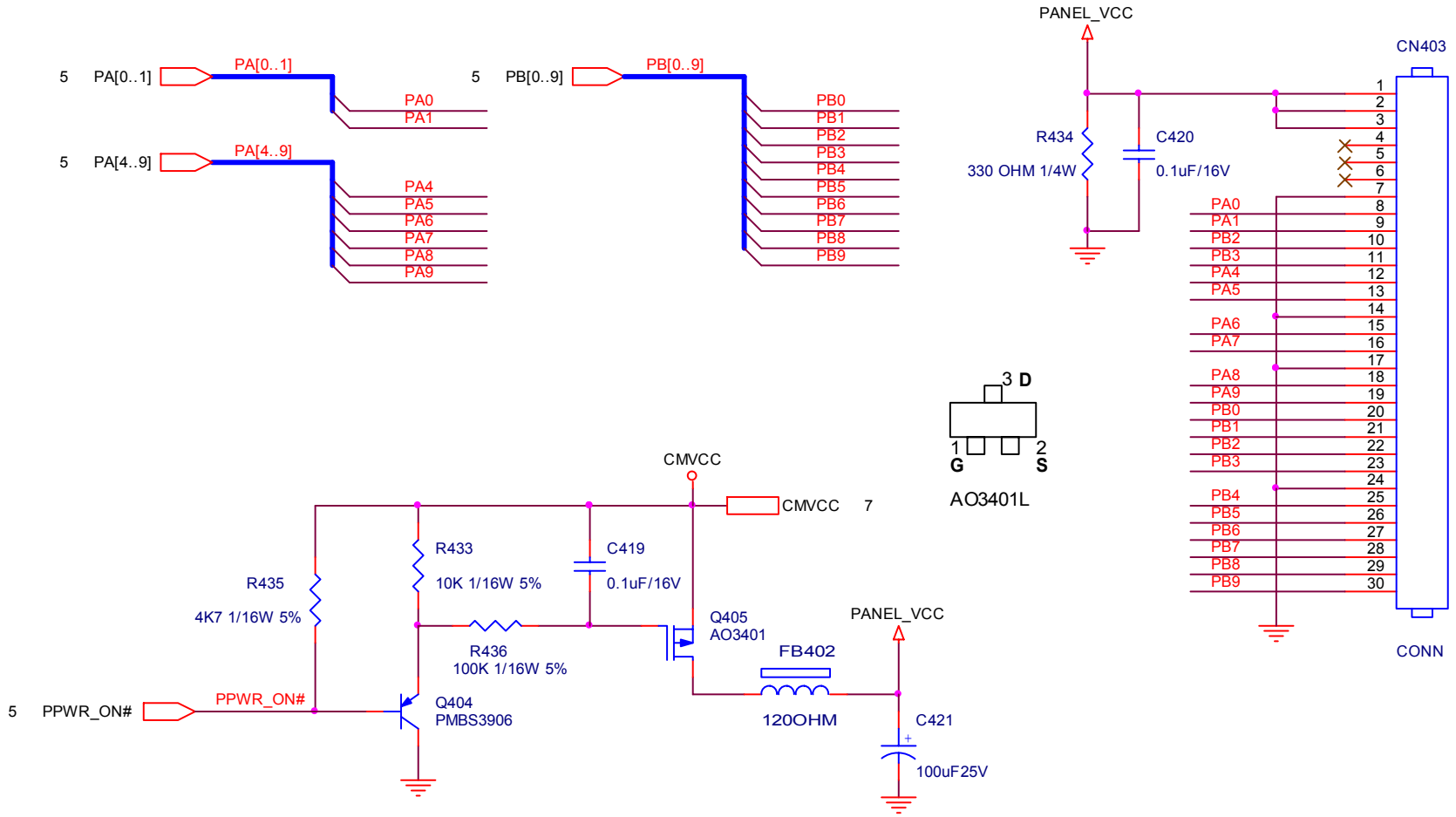

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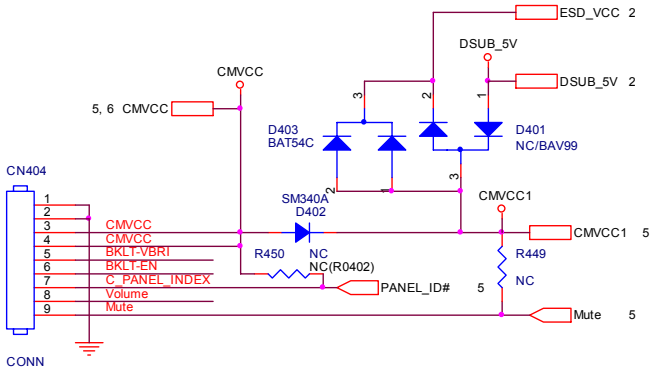
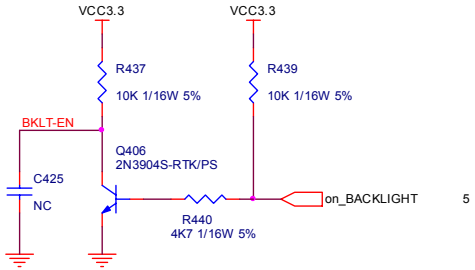
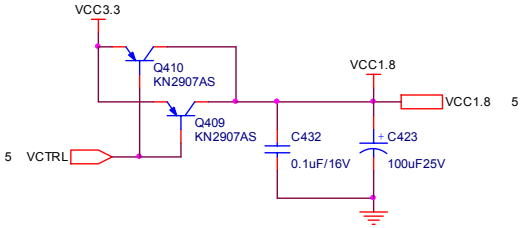
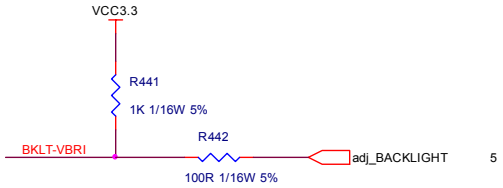
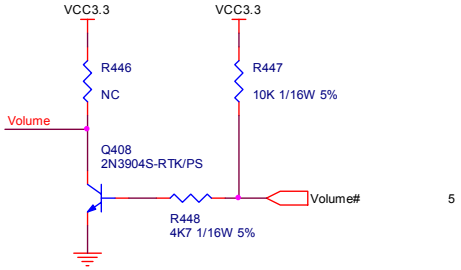
Date	Tuesday, April 08, 2008	Sheet	6 of 7		

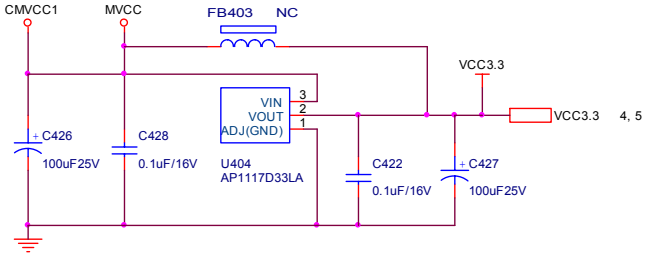








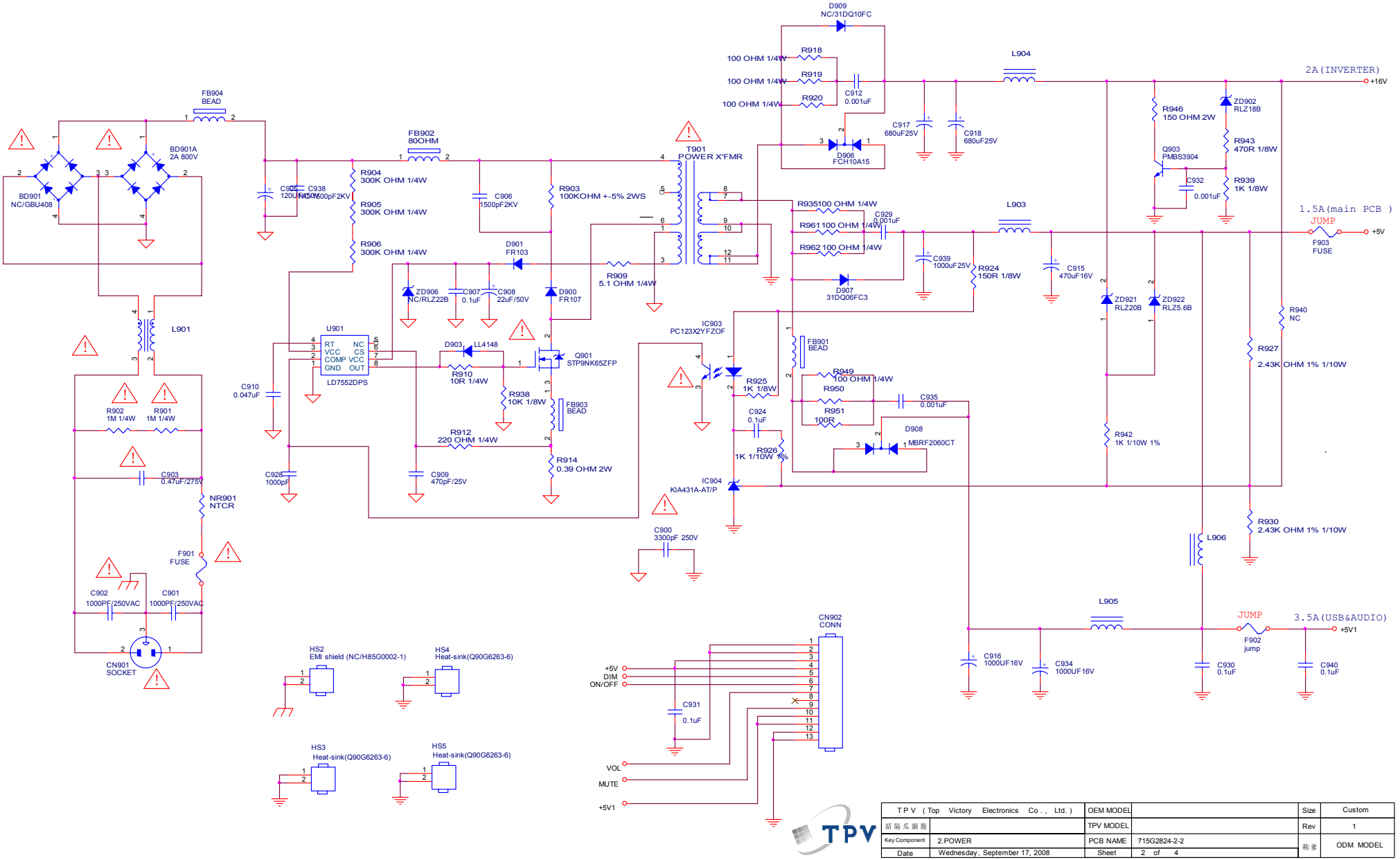




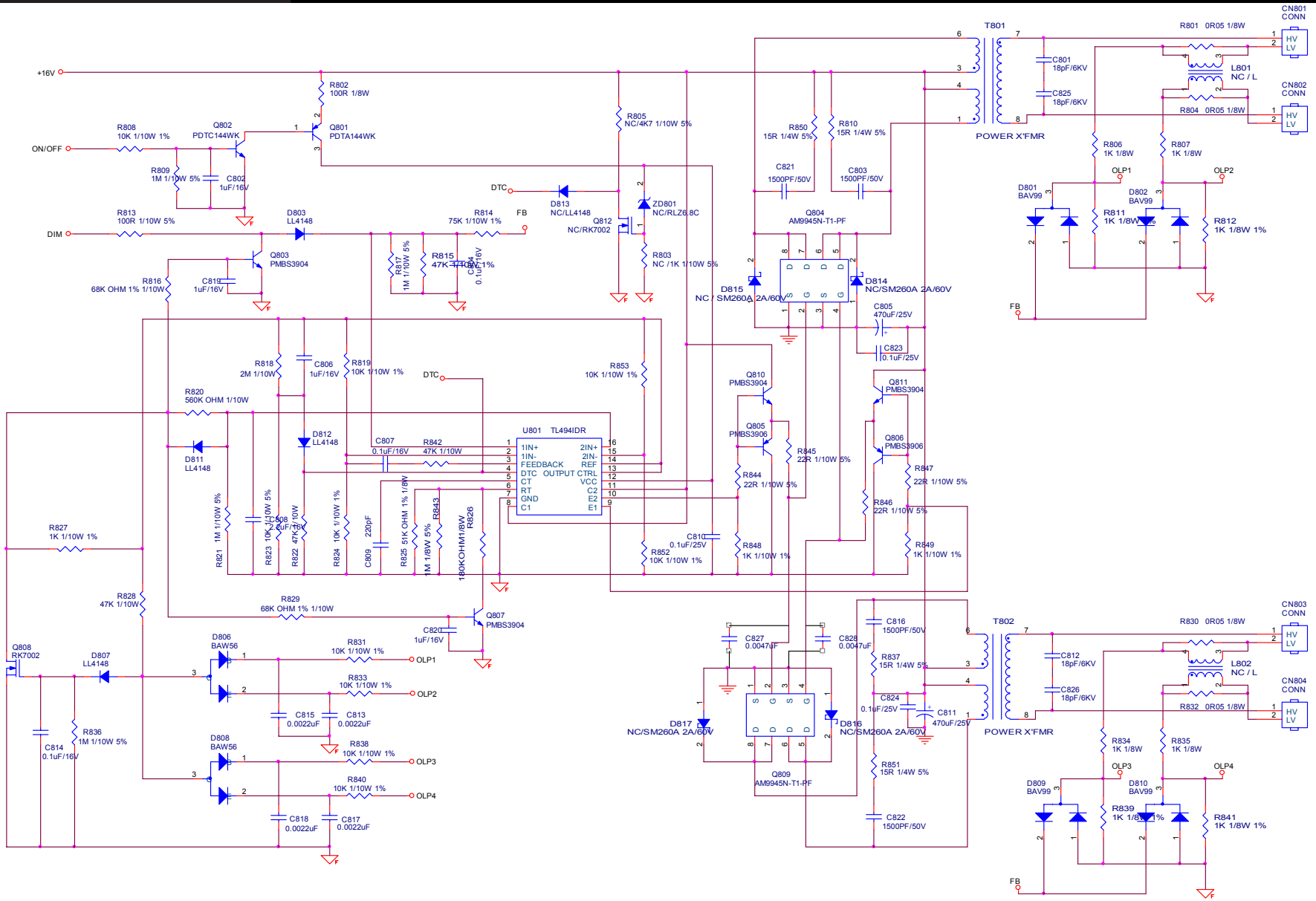
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	B
結隔瓜錮腹		TPV MODEL		Rev	1
Key Component	05.Power	PCB NAME	715G2904-1	称爹	<称爹>
Date	Tuesday, April 08, 2008	Sheet	7 of 7		

6.2 Power Board

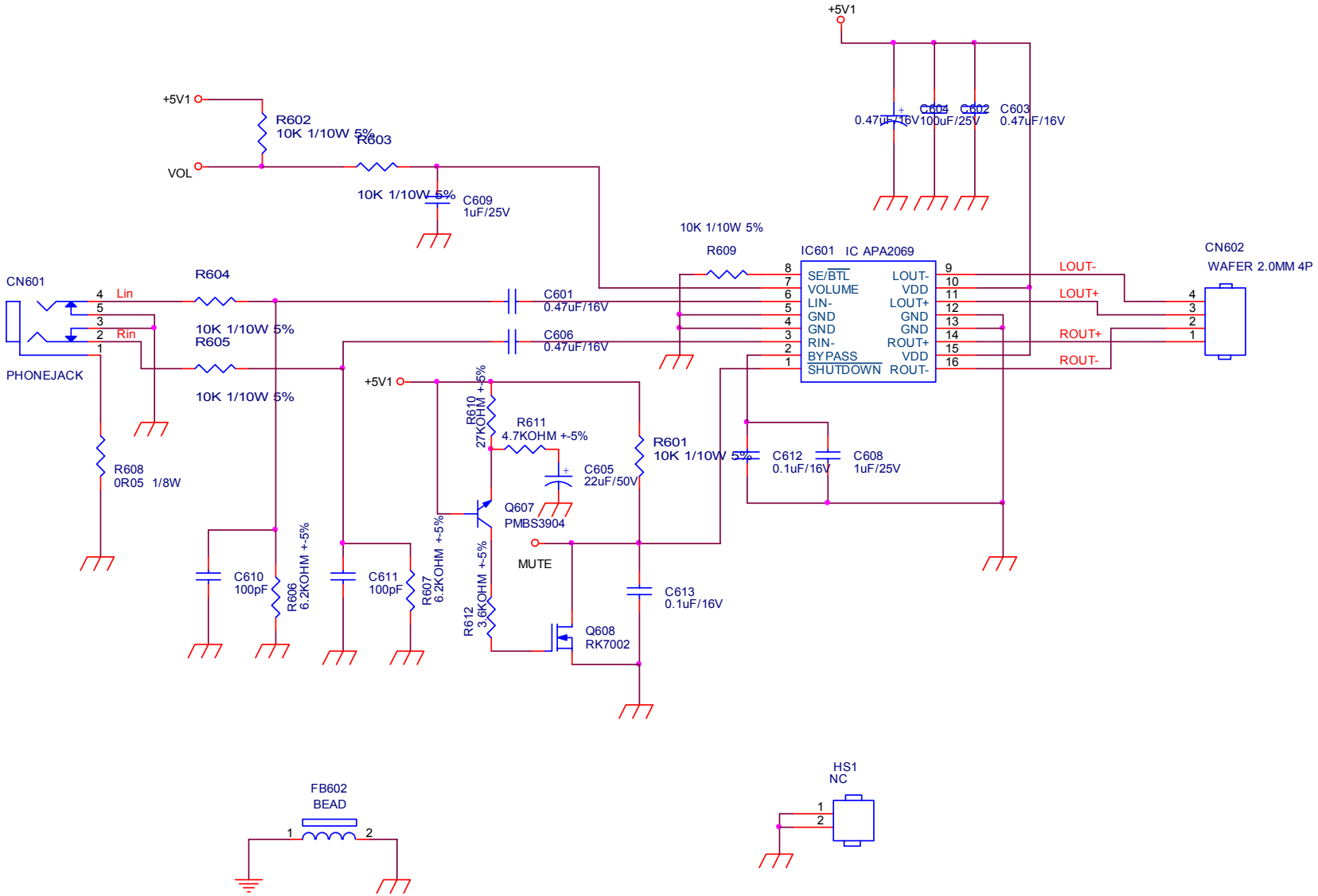
715G2824 2 2



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL		Size	Custom
結 陶 瓜 鎖 腹		TPV MODEL		Rev	1
Key Component	2.POWER	PCB NAME	715G2824-2-2	称 爹	ODM MODEL
Date	Wednesday, September 17, 2008	Sheet	2 of 4		



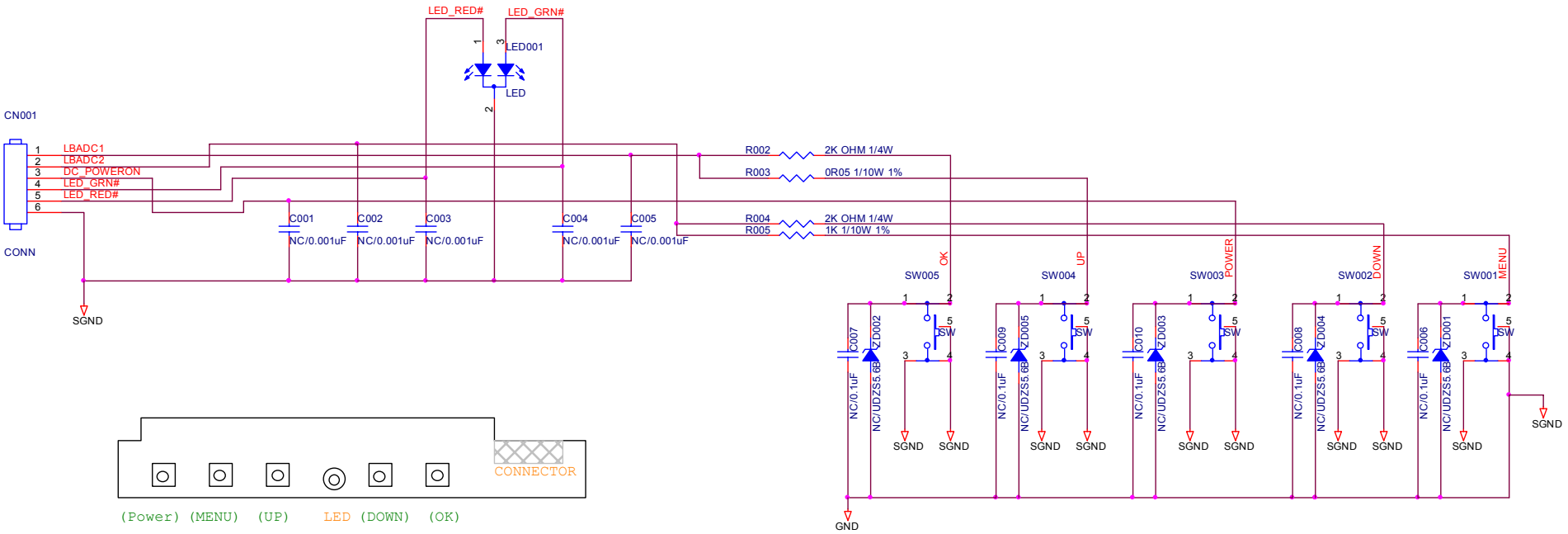
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	Custom
結構瓜編履		TPV MODEL		Rev	1
Key Component	03.INVERTER	PCB NAME	715G2824-2-2	称爹	ODM MODEL
Date	Wednesday, September 17, 2008	Sheet	3 of 4		



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	Custom
結隔瓜網腹		TPV MODEL		Rev	1
Key Component	04.AUDIO	PCB NAME	715G2824-2-2	称爹	ODM MODEL
Date	Wednesday, September 17, 2008	Sheet	4 of 4		

6.3 Key Board

715G2835 1

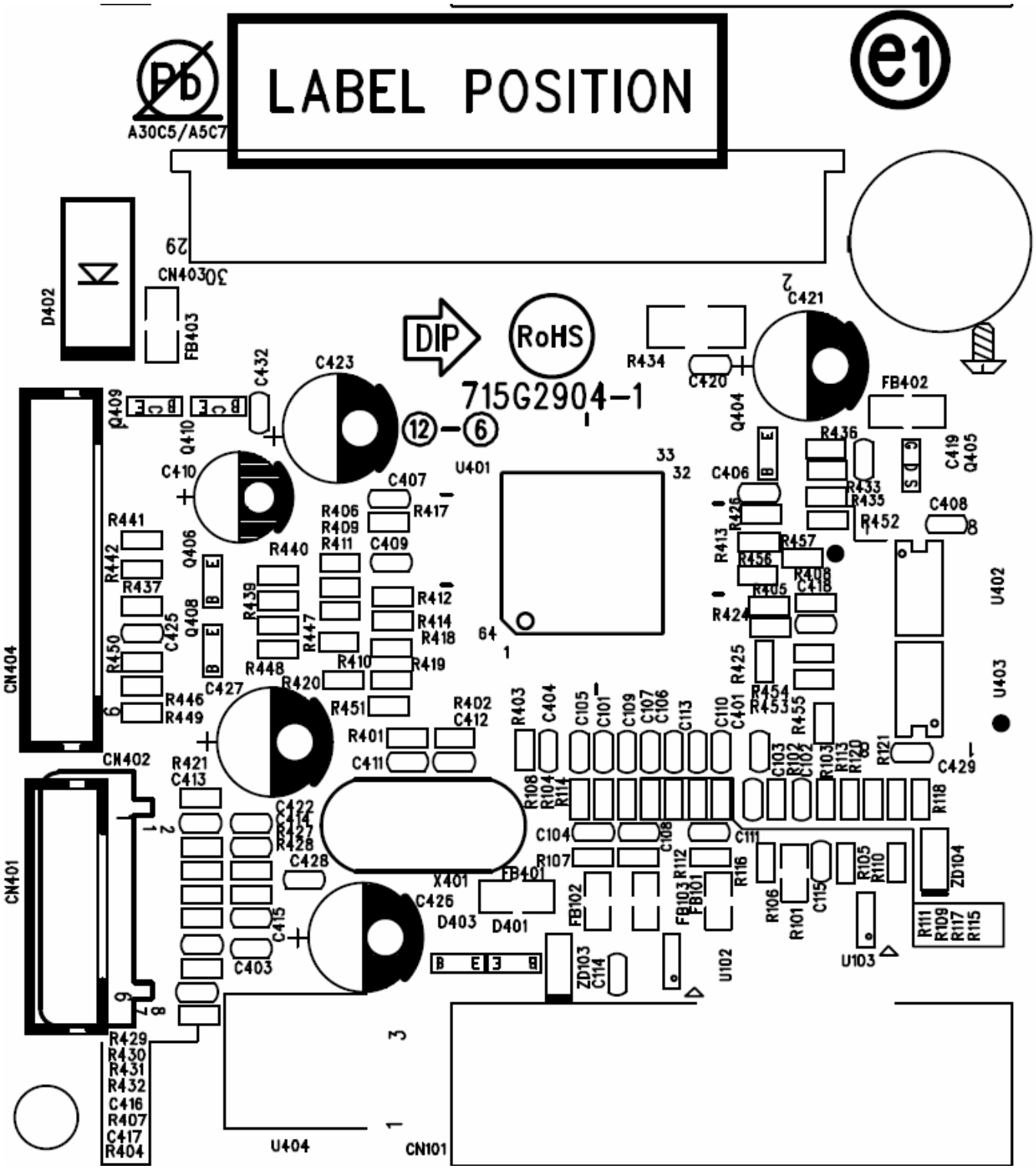


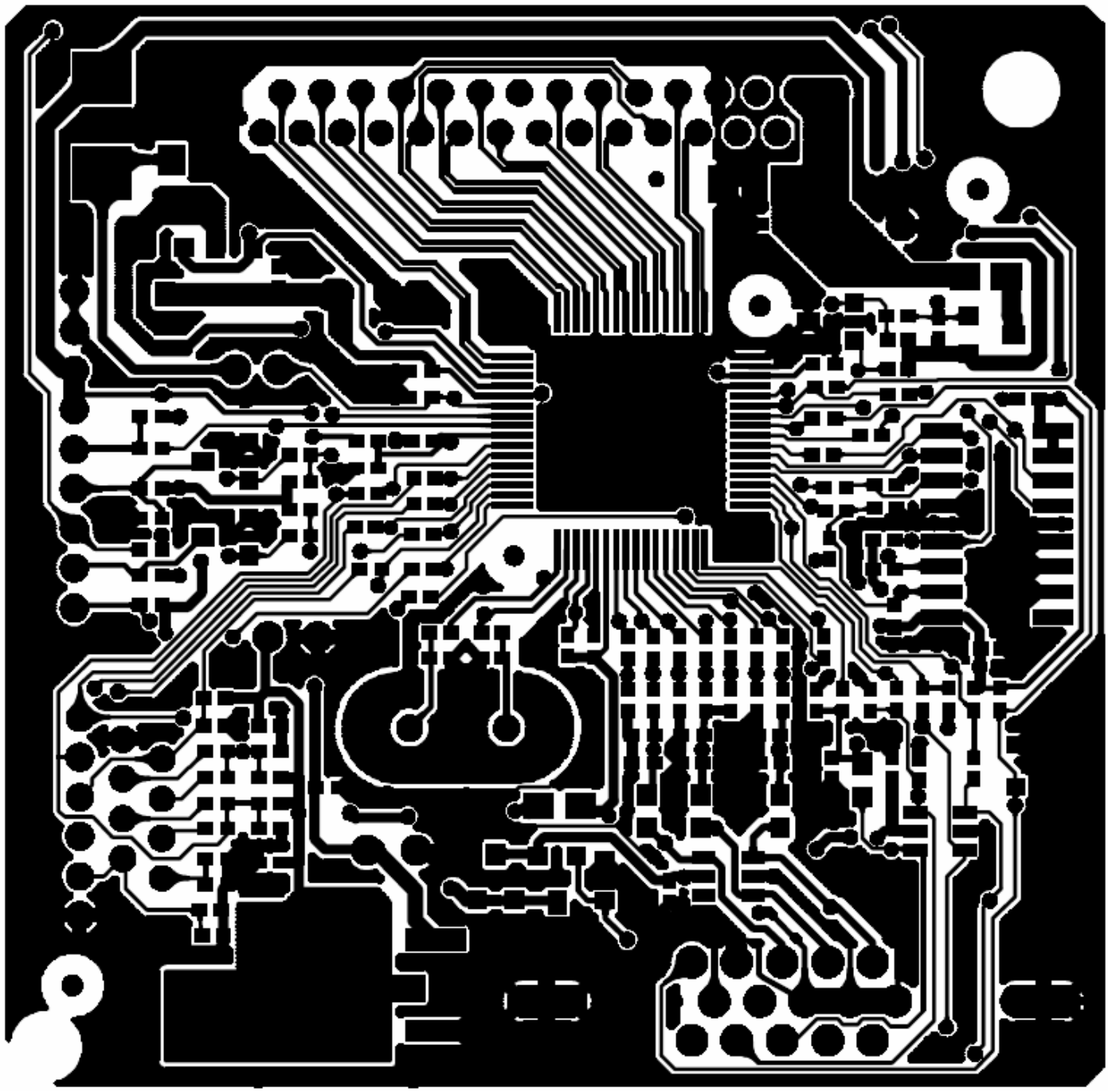
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	B
結隔瓜鋼腹		TPV MODEL		Rev	A
Key Component	2.0.key	PCB NAME	715G2835-1	称爹	<称爹>
Date	Thursday, January 10, 2008	Sheet	2 of 2		

7. PCB Layout

7.1 Main Board

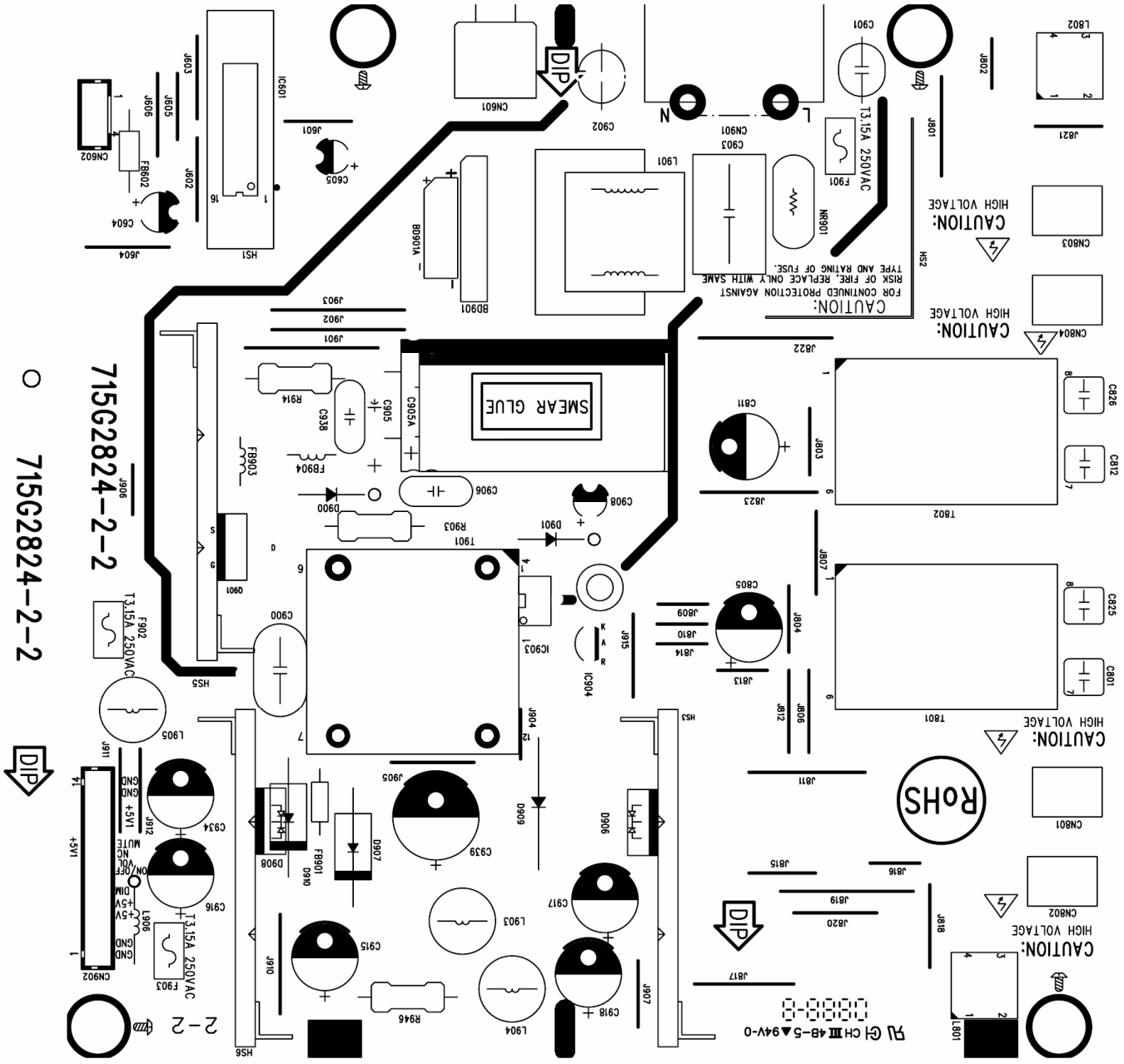
715G2904 1

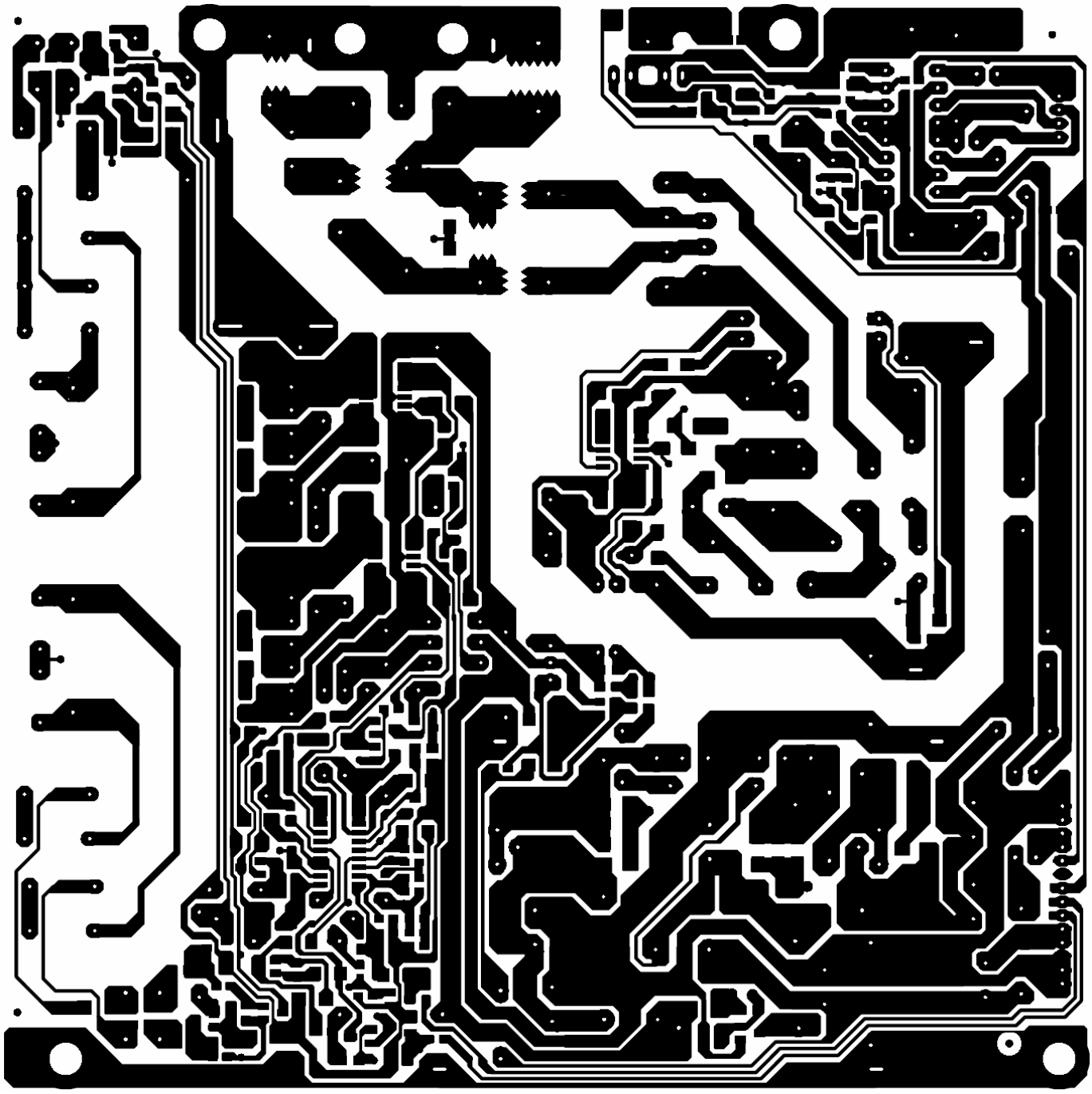


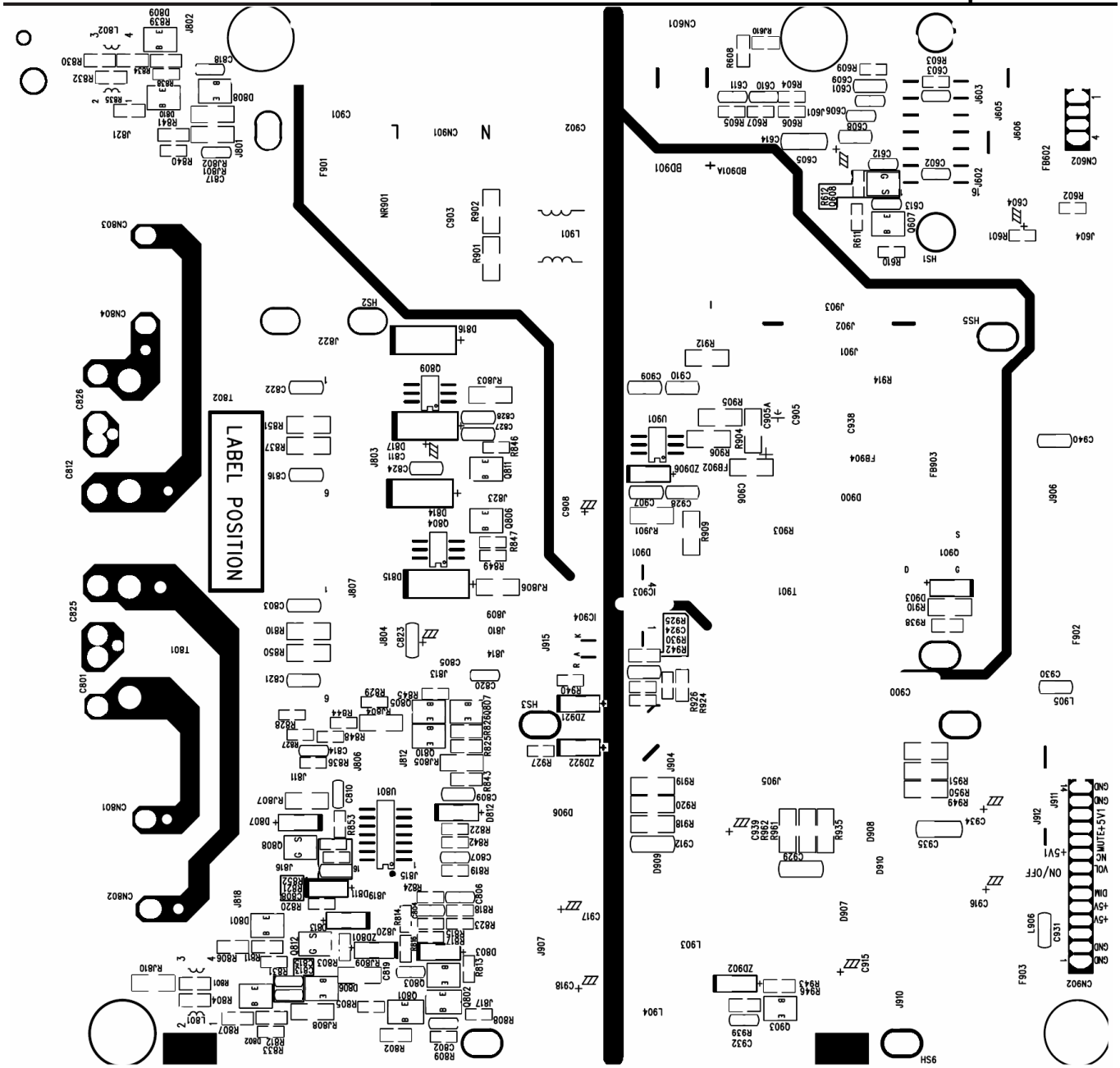


7.2 Power Board

715G2824 2 2

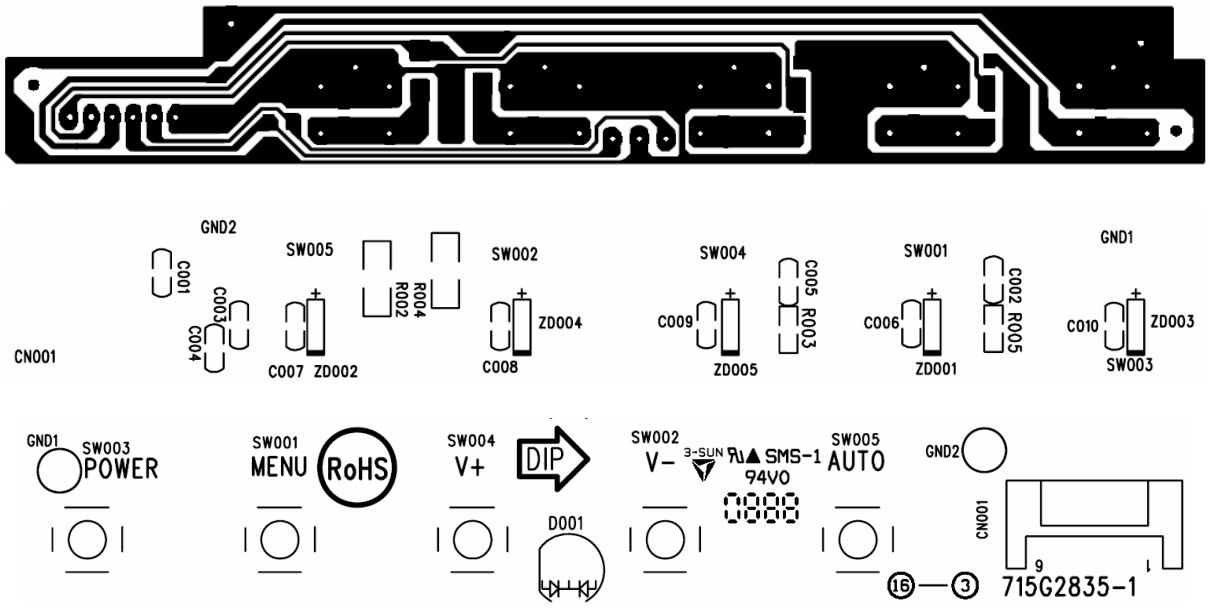






7.3 Key Board

715G2835 1



8. Maintainability

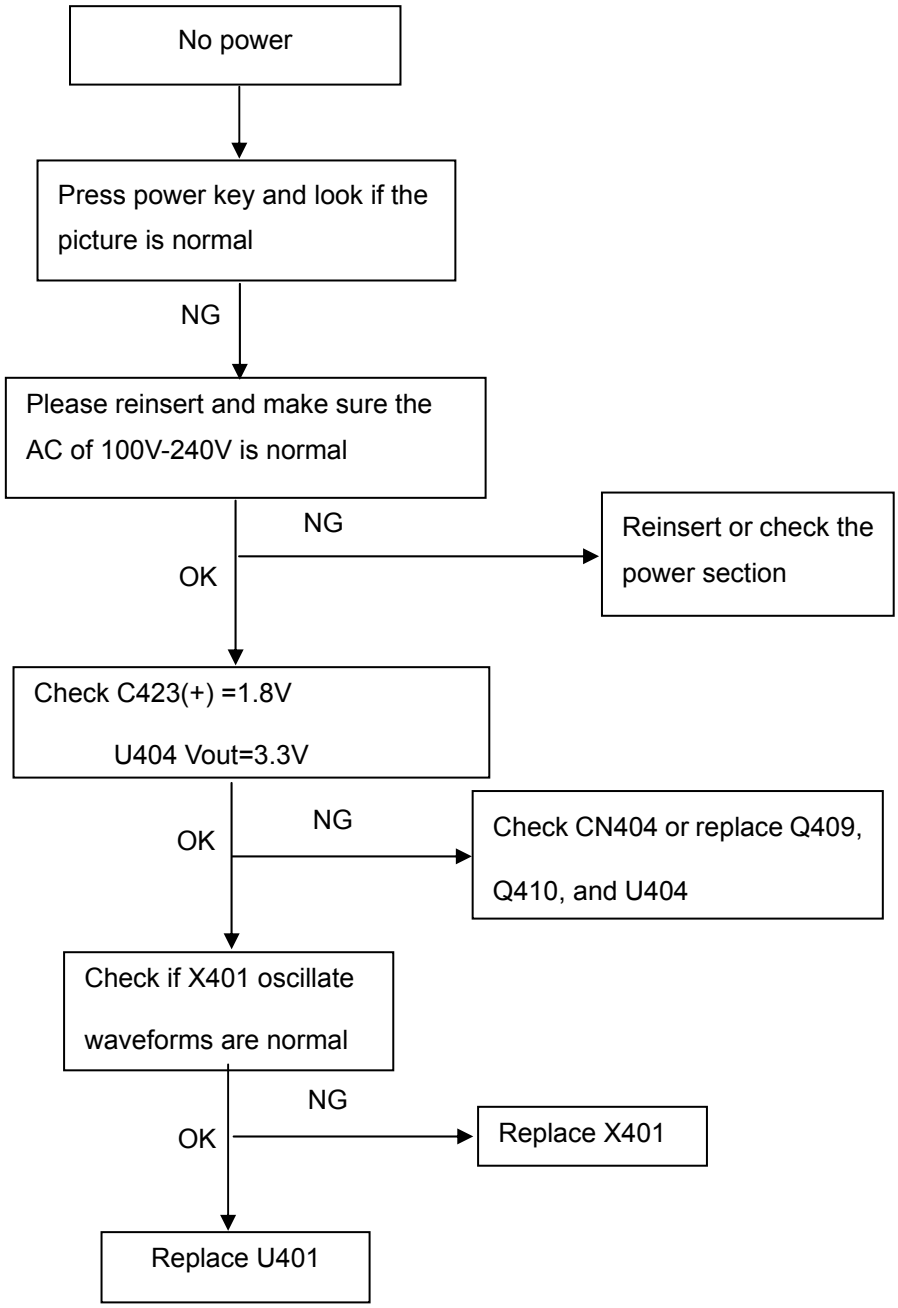
8.1 Equipments and Tools Requirement

1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

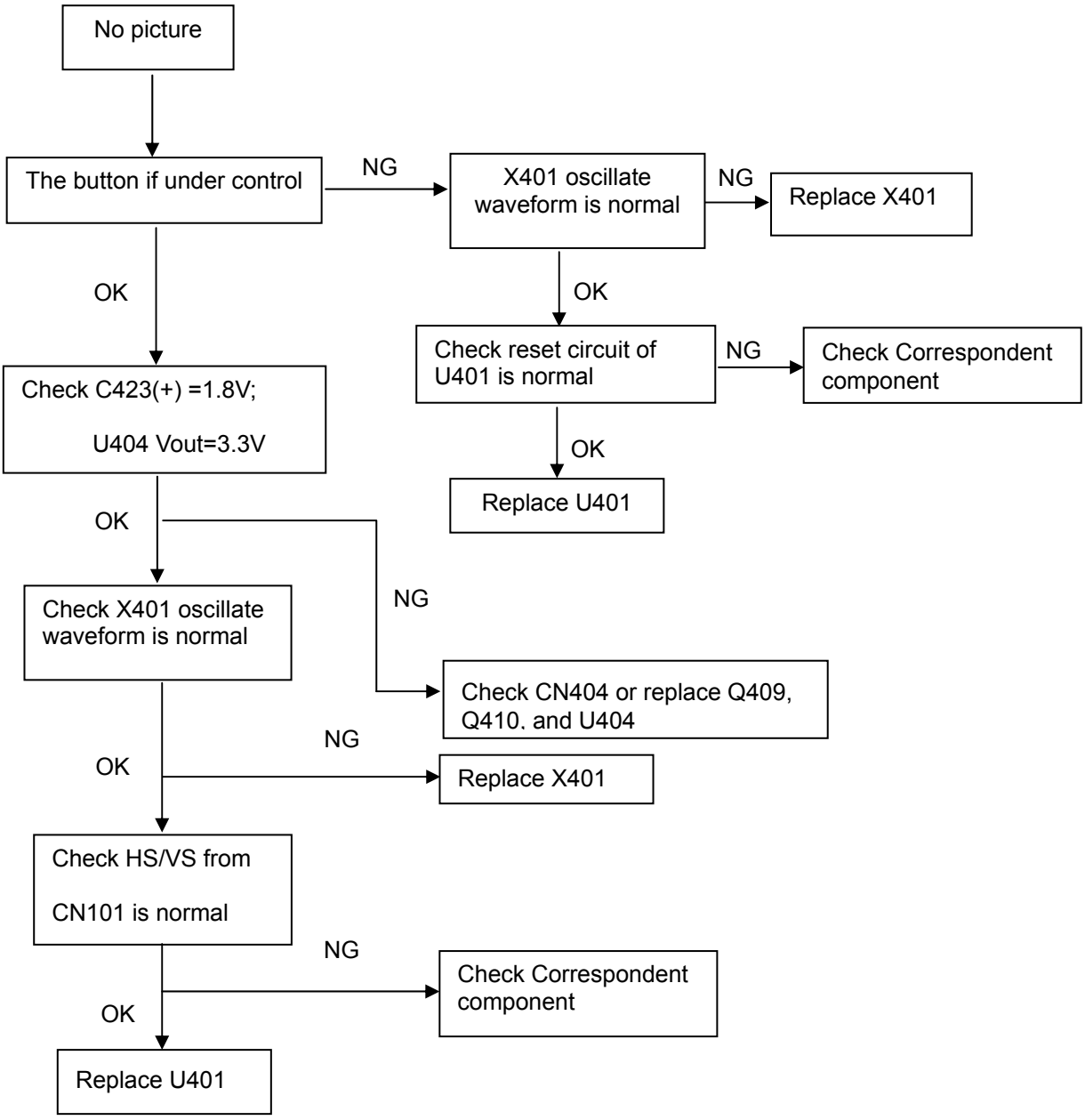
8.2 Trouble Shooting

8.2.1 Main Board

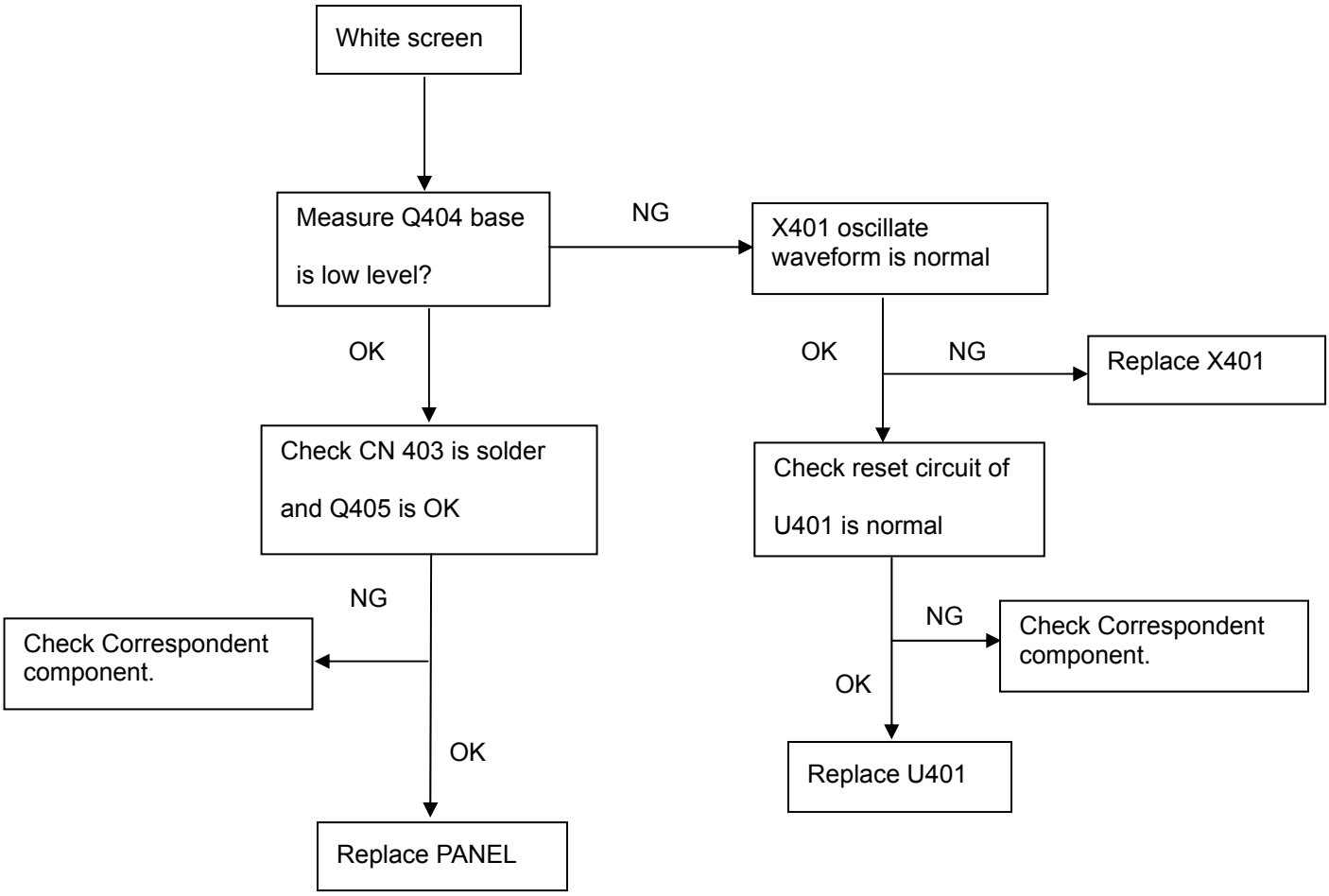
No power



No picture (LED orange)

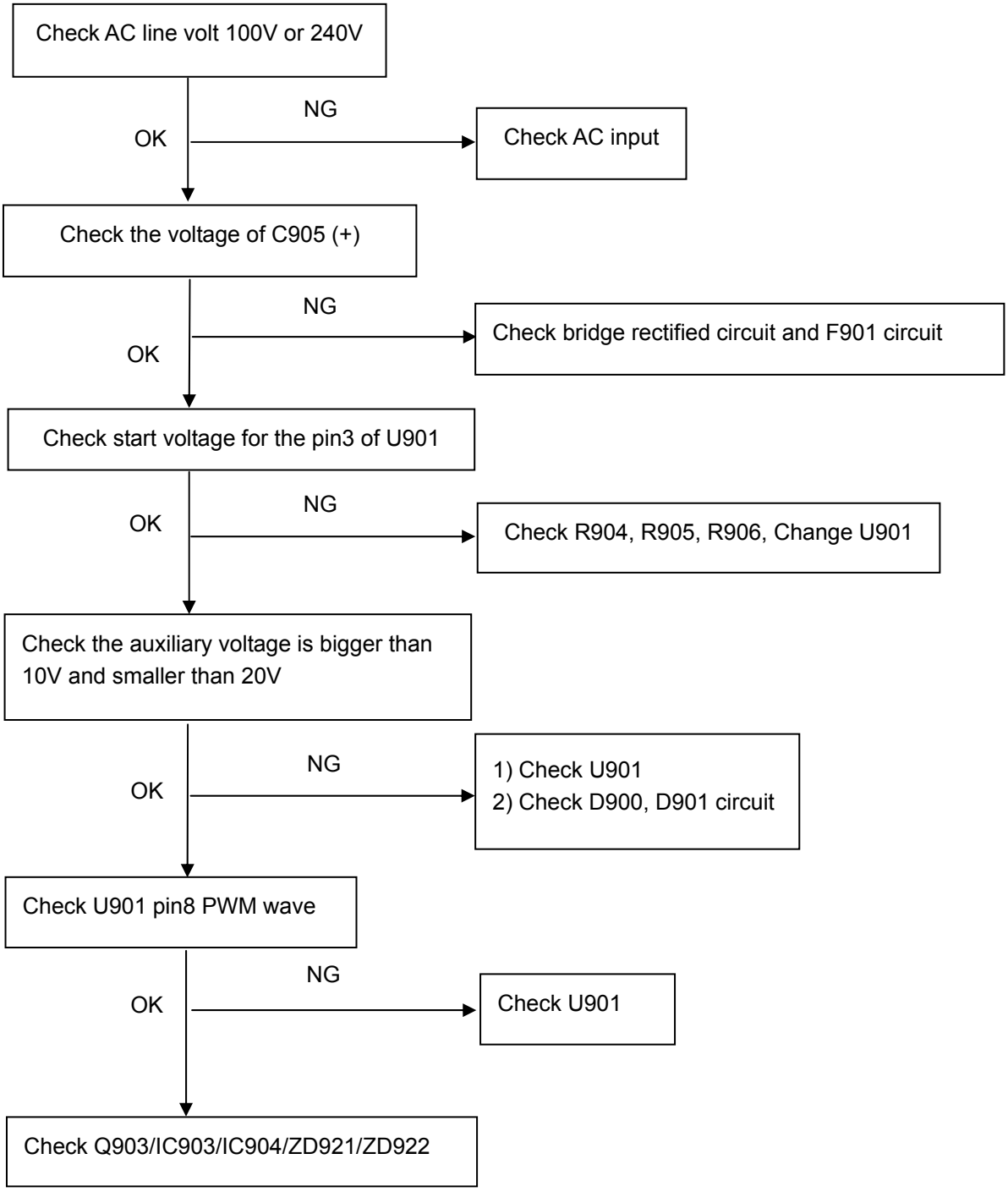


White screen

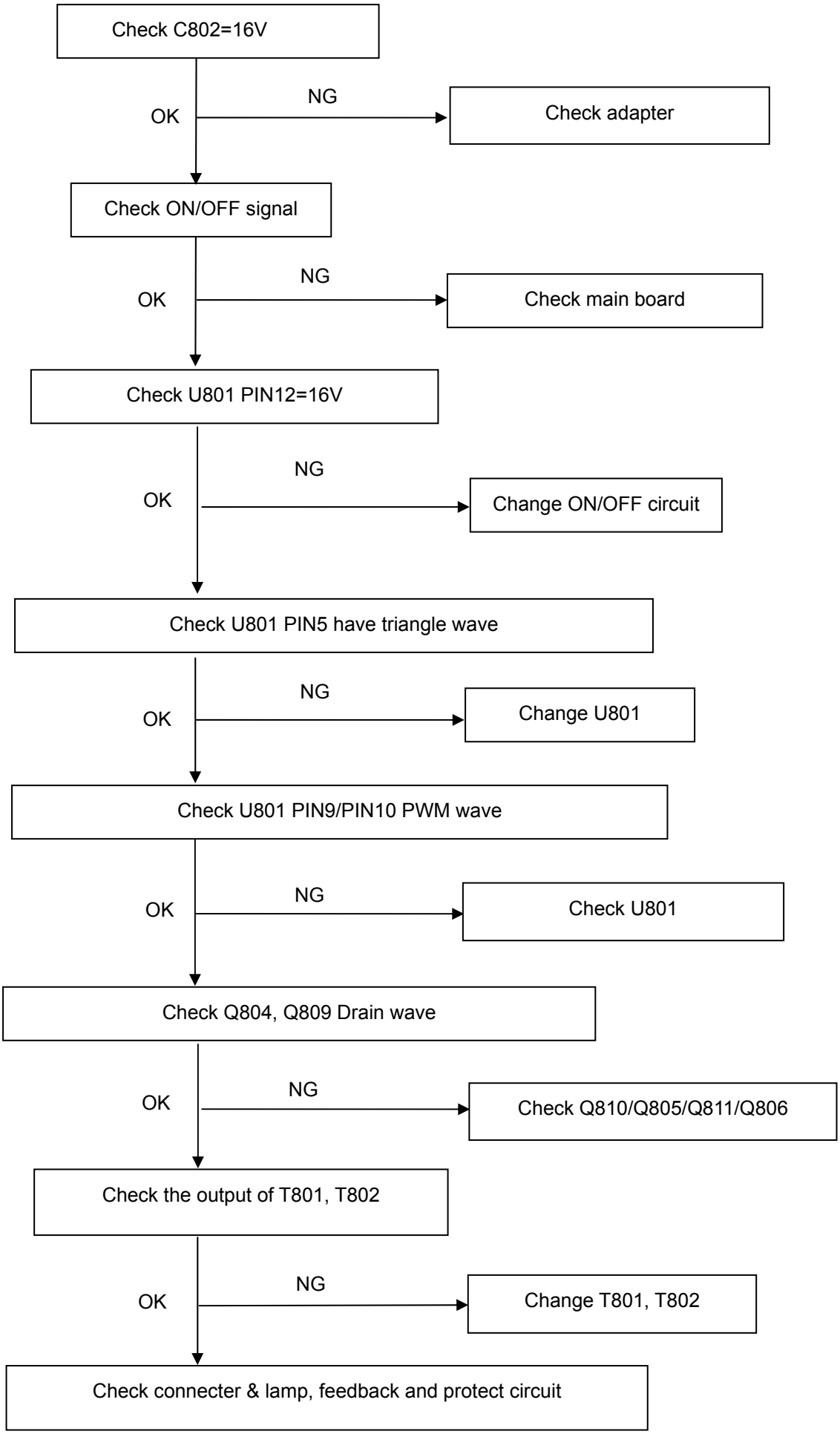


8.2.2 Power Board

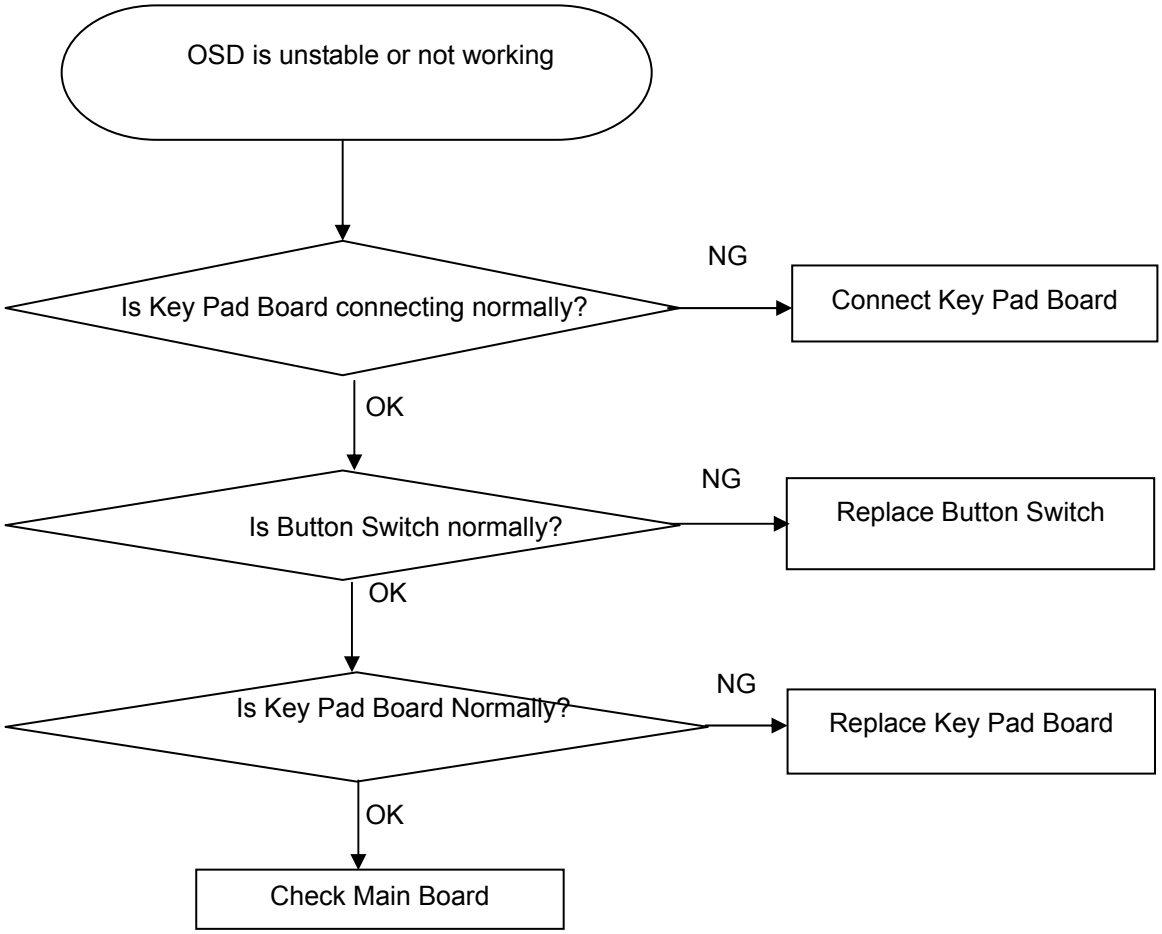
No power



No backlight



8.2.3 Key Board



9. White-Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding White-Balance adjustment.

1. How to do the Chroma-7120 MEM. Channel setting

   A. Reference to chroma 7120 user guide

   B. Use " **SC**" key and " **NEXT**" key to modify x,y,Y value and use "**ID**" key to modify the TEXT description Following is the procedure to do white-balance adjust

2. Setting the color temp. you want

   A. MEM. (Warm color):

   6500K color temp. parameter is x = 313 ±30, y = 329 ±30, Y>180cd/m^2

   B. MEM. (Normal color):

   7300K color temp. parameter is x = 302 ±30, y = 318 ±30, Y>180cd/m^2

   C. MEM. (Cool color):

   9300K color temp. parameter is x = 283 ±30, y = 297 ±30, Y>150cd/m^2

   D. MEM. (sRGB color):

   sRGB color temp. parameter is x = 313 ±30, y = 329 ±30, Y>180cd/m^2

3. Into factory mode:

   Turn on power, press the MENU button, pull out the power cord, and then plug the power cord. Then the factory OSD will be at the left top of the panel.

4. Bias adjustment:

   Set the **Contrast** to 50; Adjust the **Brightness** to 90.

5. Gain adjustment:

Move cursor to "-F-" and press MENU key

   A. Adjust (6500K) color-temperature

      1. Switch the chroma-7120 to **RGB-Mode** (with press "MODE" button)

      2. Switch the MEM .channel to Channel 3 (with up or down arrow on chroma 7120)

      3. The LCD-indicator on chroma 7120 will show x = 313 ±30, y = 329 ±30, Y>180cd/m^2

      4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100

      5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100

      6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100

      7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

B. Adjust (7300K) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM .channel to Channel 4 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 302 ±30, y = 318 ±30, Y>180cd/m^2
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

C. Adjust (9300K) color-temperature

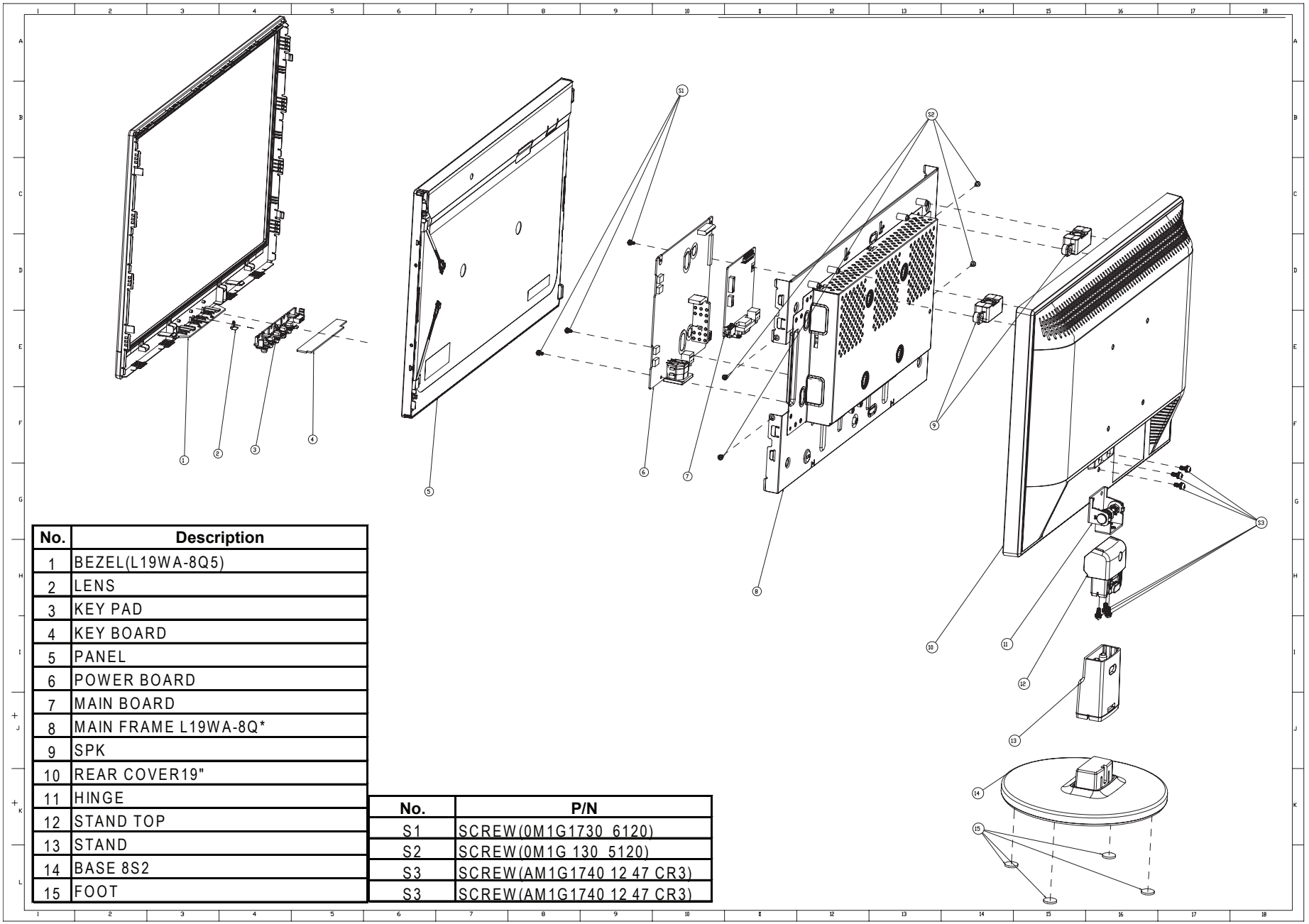
1. Switch the Chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM. Channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 283 ±30, y = 297 ±30, Y>150cd/m^2
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

D. Adjust (sRGB) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM .channel to Channel 10 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 313 ±30, y = 329 ±30, Y>180cd/m^2
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE of on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

E. Turn the Power-button off to quit from factory mode.

10. Monitor Exploded View



No.	Description
1	BEZEL(L19WA-8Q5)
2	LENS
3	KEY PAD
4	KEY BOARD
5	PANEL
6	POWER BOARD
7	MAIN BOARD
8	MAIN FRAME L19WA-8Q*
9	SPK
10	REAR COVER19"
11	HINGE
12	STAND TOP
13	STAND
14	BASE 8S2
15	FOOT

No.	P/N
S1	SCREW(0M1G1730_6120)
S2	SCREW(0M1G 130_5120)
S3	SCREW(AM1G1740 12 47 CR3)
S3	SCREW(AM1G1740 12 47 CR3)

11. BOM List

T98SM5NBX2KPAN

Location	Part No.	Description	Remark
	040G 58162461A	EPA LABEL	
	050G 600 2	HANDLE1	
	050G 600 3	HANDLE2	
	052G 1185 1	BIG TAPE	
	052G 1186	SMALL TAPE	
	052G 1207 A	CONDUCTIVE TAPE 45mm *25mm *0.08mm	
	052G 1211 B	CONDUCTIVE TAPE 85mm *40mm *0.09mm	
	052G 2191 A	PAPER TAPE	
	078G 322514 K	SPK 8 OHM 1.5W 43X18 280 320MM KUAIDA	
E08902	089G 725HAA DB	D-SUB CABLE	2nd source
E08902	089G 725LAA DB	D-SUB CABLE	
	089G179J30N517	FFC CABLE	
	089G404A15N YH	POWER CORD	
E09502	095G8014 6D681	WIRE HARNESS 6P-6P 160MM	2nd source
E09502	095G8014 6W681	WIRE HARNESS 6P(PH)-6P(PH) 160MM	
	0M1G 130 5120	SCREW	
	0M1G1730 6120	SCREW,42-D020523	
	705GQ834072	19" LCD STAND-BASE ASS'Y	
	AM1G1740 12 47 CR3	SCREW	
	Q12G6600 6	FOOT	
	Q34G0297AED 1B0100	STAND TOP	
	Q34G0298AED 1B0120	STAND	
	Q34G0299AED 1B0133	BASE8S2	
M037	Q37G0067015	HINGE	
M037	SQ37G0067015	HINGE ASS'Y	2nd source
	015F0067510	SUPPORT	
	015F0067020	ACTIVE PLATE	
	004F061210T 00	METAL WASHERS12.0*8.00*1.6H	
	004F061210T 01	METAL WASHERS12.0*4.72*1.0T	
	004F061210M 00	METAL WASHERS12.0*6.03*4.70H	
	004F0612052 00	METAL WASHER	
	028F0620090	SHAFT	
	0M1F3050106	SCREW	
	002F0605100	SCREW NUTS M6.0*P1.0	
	750GLS90M31DCN	PANEL LTM190M2-L31 8UP FQ SEC	
	AM1G1740 12 47 CR3	SCREW	
	CBPC8SM5A2Q1	MAIN BOARD G2904-1-X-X-15-080408	
	040G 45762412B	CBPC LABEL	
CN401	033G3802 6	WAFER	
CN404	033G3802 9	WAFER 9P RIGHT ANELE PITCH	
CN403	033G801930F CH JS	CONNECTOR	
C421	067G 3151014KV	EC 105℃ CAP 100UF M 25V	
C427	067G 3151014KV	EC 105℃ CAP 100UF M 25V	
C426	067G 3151014KV	EC 105℃ CAP 100UF M 25V	
C423	067G 3151014KV	EC 105℃ CAP 100UF M 25V	
C410	067G215V100 7R	LOW E.S.R 10UF M 50V	
CN101	088G 35315F HD	D-SUB CONN F ATTACHED SCREW	2nd source
CN101	088G 35315F XH	D-SUB 15PIN VERTICAL CONN WITH SCREW	2nd source
CN101	088G 35315F XH	D-SUB 15PIN VERTICAL CONN WITH SCREW	
X401	093G 22 53 J	14.31818MHZ/32PF/49US	
	709G2904 QM001	CONSUMPTIVE ASS'Y	
	055G 2	ALCOHOL	
	055G 23524	WELDING FLUX WITHOUT PB	

	Q55G 100625	TIN STICK_LOW ARGENTUM	
U401	056G 562557	IC TSUM1PFR-LF	
U404	056G 563 52	IC AP1117D33L-13 TO252-3L DIODES	
U102	056G 662 13	IC AZC099-04S SOT23-6L	
U103	056G 662 13	IC AZC099-04S SOT23-6L	
U402	056G1133 81(WW7MRT9SKQ1)	SST25LF020A-33-4C-SAE	
Q404	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q406	057G 417 12 T	KEC 2N3904S-RTK/PS	
Q408	057G 417 12 T	KEC 2N3904S-RTK/PS	
Q409	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q410	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q405	057G 763 1	A03401 SOT23 BY AOS(A1)	
R401	061G0402000	RST CHIP MAX 0R05 1/16W	
R402	061G0402000	RST CHIP MAX 0R05 1/16W	
R102	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R103	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R104	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R108	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R110	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R111	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R113	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R114	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R115	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R117	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R405	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R418	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R457	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R456	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R442	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R420	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R419	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R413	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R412	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R411	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R441	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R118	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R447	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R439	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R437	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R433	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R421	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R417	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R408	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R407	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R406	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R404	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R121	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R120	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R436	061G0402104	RST CHIPR 100 KOHM +-5% 1/16W	
R410	061G0402121	RST CHIP 120R 1/16W 5%	
R414	061G0402121	RST CHIP 120R 1/16W 5%	
R409	061G0402203	RST CHIP 20K 1/16W 5%	
R106	061G0402222	RST CHIPR 2.2 KOHM +-5% 1/16W	
R105	061G0402222	RST CHIPR 2.2 KOHM +-5% 1/16W	
R109	061G0402390 0F	RST CHIP 390R 1/16W 1%	
R403	061G0402390 0F	RST CHIP 390R 1/16W 1%	
R428	061G0402392	RST CHIP 3.9K 1/16W 5%	

R427	061G0402392	RST CHIP 3.9K 1/16W 5%	
R435	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R440	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R448	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R107	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R112	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R116	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R101	061G0603000	RST CHIP MAX 0R05 1/10W	
R434	061G1206331	RST CHIPR 330 OHM +-5% 1/4W	
C432	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C428	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C422	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C420	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C419	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C417	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C416	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C415	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C414	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C413	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C409	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C407	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C406	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C404	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C403	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C401	065G0402104 15	MLCC 0402 0.1UF K 16V X5R	
C412	065G0402220 31	CHIP 22PF 50V NPO	
C411	065G0402220 31	CHIP 22PF 50V NPO	
C103	065G0402220 31	CHIP 22PF 50V NPO	
C102	065G0402220 31	CHIP 22PF 50V NPO	
C408	065G0402224 17	CAP CER 0.22UF -20%-80%	
C113	065G0402473 12	CHIP 0.047UF 16V X7R	
C110	065G0402473 12	CHIP 0.047UF 16V X7R	
C109	065G0402473 12	CHIP 0.047UF 16V X7R	
C107	065G0402473 12	CHIP 0.047UF 16V X7R	
C106	065G0402473 12	CHIP 0.047UF 16V X7R	
C105	065G0402473 12	CHIP 0.047UF 16V X7R	
C101	065G0402473 12	CHIP 0.047UF 16V X7R	
C104	065G0402509 31	CHIP 5PF 50V NPO	
C108	065G0402509 31	CHIP 5PF 50V NPO	
C111	065G0402509 31	CHIP 5PF 50V NPO	
FB402	071G 56K121 M	CHIP BEAD	
FB401	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 BULLWILL	
FB101	071G 59K190 B	19 OHM BEAD	
FB102	071G 59K190 B	19 OHM BEAD	
FB103	071G 59K190 B	19 OHM BEAD	
D403	093G 60230	BAT54C(L43)	
ZD103	093G 39S 34 T	UDZSNP5.6B ROHM	
ZD104	093G 39S 34 T	UDZSNP5.6B ROHM	
D402	093G3004 3	SM340A	
	715G2904 1	MAIN PCB 57X64X1.6MM DS	
U404	056G 563916	IC LD1117DT33TR DPAK	2nd source
	709G2904 QS001	CONSUMPTIVE ASS'Y	
	052G 2191 A	PAPER TAPE	
	052G6026 3	MESH PRINTTING PAPER	
Q406	057G 417518	TRA LMBT3904LT1G 200MA/40V SOT-23 LRC	2nd source
Q408	057G 417518	TRA LMBT3904LT1G 200MA/40V SOT-23 LRC	2nd source
Q404	057G 417517	TRA LMBT3906LT1G -200MA/-40V SOT-23 LRC	2nd source

ZD103	093G 39S501 T	LUDZS5.6BT1G BY LRC	2nd source
ZD104	093G 39S501 T	LUDZS5.6BT1G BY LRC	2nd source
	KEPC7QAK	KEY BOARD G2835-1-X-X-1-080110	
CN001	033G3802 6H	WAFER 6P RIGHT ANGLE PITCH 2.0	
SW001	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP	
SW002	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP	
SW003	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP	
SW004	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP	
SW005	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP	
SW001	077G 600 1A CJ	TACT SWITCH 2PIN	2nd source
SW002	077G 600 1A CJ	TACT SWITCH 2PIN	2nd source
SW003	077G 600 1A CJ	TACT SWITCH 2PIN	2nd source
SW004	077G 600 1A CJ	TACT SWITCH 2PIN	2nd source
SW005	077G 600 1A CJ	TACT SWITCH 2PIN	2nd source
SW001	077G 600 1A HJ	TACT SWITCH 5PIN	2nd source
SW002	077G 600 1A HJ	TACT SWITCH 5PIN	2nd source
SW003	077G 600 1A HJ	TACT SWITCH 5PIN	2nd source
SW004	077G 600 1A HJ	TACT SWITCH 5PIN	2nd source
SW005	077G 600 1A HJ	TACT SWITCH 5PIN	2nd source
D001	081G 12 1F GH	1ED 3PINΦ3(YELLOW&GREEN)GHZYG603D2-5B	
D001	081G 12 1F GP	LED 3Φ(YELLOW&GREEN) GP32032M/G307-ZY-50-C	2nd source
	709G2835 QM018	COMSUPTIVE ASS'Y	
R003	061G0603000 1F	RST CHIPR 0 OHM +-1% 1/10W	
R005	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R002	061G1206200 1F	RST CHIPR 2.0 KOHM +-1% 1/4W	
R004	061G1206200 1F	RST CHIPR 2.0 KOHM +-1% 1/4W	
	709G2835 QS018	COMSUPTIVE ASS'Y	
	715G2835 1	KEY-PCB	
	PWPC8942MYK5	POWER BOARD G2824-1-2-X-17-090107	
	040G 45762412B	CBPC LABEL	
CN602	033G3802 4	WAFER EH-4	
CN804	033G8021 2E U	INVERT CONNECTOR	
CN803	033G8021 2E U	INVERT CONNECTOR	
CN802	033G8021 2E U	INVERT CONNECTOR	
CN801	033G8021 2E U	INVERT CONNECTOR	
IC903	056G 139 3A	IC PC123Y22FZ0F	
IC601	056G 616 34	IC APA2069JITUL 2.6W*2 PDIP-16	
NR901	061G 5810T	RST NTCR 8 OHM +-20% 4A 13MM THINKING	
C903	063G 10747410V	0.47UF 275VAC ARCO	
C801	065G 3J1806ET	18PF 5% SL3KV TDK	
C812	065G 3J1806ET	18PF 5% SL3KV TDK	
C825	065G 3J1806ET	18PF 5% SL3KV TDK	
C826	065G 3J1806ET	18PF 5% SL3KV TDK	
C901	065G306M1022BP	1000PF Y1.CAP	
C902	065G306M1022BP	1000PF Y1.CAP	
C900	065G306M3322BP	3300PF 20%	
C905	067G 40Z12115A	CAP 105C 120UF M 450V	
C905	067G 40Z12115K	EC 120UF V 450V 20*40MM	2nd source
C905	067G 40Z12115P	CAP 105C 120UF M 450V	2nd source
C915	067G215D4713KV	ELCAP 105℃ 470UF M 16V	2nd source
C917	067G215D6814KV	CAP 105℃ 680UF M 25V	2nd source
C918	067G215D6814KV	CAP 105℃ 680UF M 25V	2nd source
C916	067G215P1023AV	CAP 105℃ 1000UF M 16V	
C934	067G215P1023AV	CAP 105℃ 1000UF M 16V	
C939	067G215P1024AV	CAP 105℃ 1000UF M 25V	
C915	067G215P4713AV	CAP 105℃ 470UF M 16V	

C805	067G215P4714AV	CAP 105℃ 470UF M 25V	
C811	067G215P4714AV	CAP 105℃ 470UF M 25V	
C917	067G215P6814AV	CAP 105C 680UF M 25V	
C918	067G215P6814AV	CAP 105C 680UF M 25V	
C916	067G215S102 3K	ED1000UF 16V	2nd source
C934	067G215S102 3K	ED1000UF 16V	2nd source
C939	067G215S1024KV	EC 105℃ CAP 1000UF M 25V	2nd source
C805	067G215S4714KL	LOW ESR EC 470UF 25V	2nd source
C811	067G215S4714KL	LOW ESR EC 470UF 25V	2nd source
L903	073G 253 91 H	CHOKE COIL	
L904	073G 253 91 H	CHOKE COIL	
L905	073G 253 91 H	CHOKE COIL	
L905	073G 253 91 L	CHOKE BY LI TA	2nd source
L904	073G 253 91 L	CHOKE BY LI TA	2nd source
L903	073G 253 91 L	CHOKE BY LI TA	2nd source
L905	073G 253 91 V	CHOKE COIL 3.5UH+-10%	2nd source
L904	073G 253 91 V	CHOKE COIL 3.5UH+-10%	2nd source
L903	073G 253 91 V	CHOKE COIL 3.5UH+-10%	2nd source
L901	073L 174 40 HG	GBQM4.778.391	2nd source
T802	080GL20T510 H	X'FMR INVERTER	2nd source
T801	080GL20T510 H	X'FMR INVERTER	2nd source
T801	080GL20T510 DN	X'FMR INVERTER 142UH	2nd source
T802	080GL20T510 DN	X'FMR INVERTER 142UH	2nd source
T901	080GL22T 3 N	X'FMR 490UH YUVA-822	
CN901	087G 501 32 S	AC SOCKET	
CN601	088G 30214K DC	PHONE JACK 5PIN	
BD901A	093G 50460 28	BRIDGE DIODE KBP208G LITEON	
D907	093G3006 1 1	31DQ06FC3 NIHON INTER	
CN902	095G 82014W510	WIRE HARNESS 14P(SAN)-9(PH)	
C604	096G 29 8	TUBE	
C908	096G 29 8	TUBE	
	705GQ757021	Q901 ASS'Y	
Q901	057G 667 30	2SK2645	2nd source
Q901	057G 724 11	STP9NK65ZFP	
	0M1G 930 8120	SCREW	
HS5	Q90G6263 6	HEAT SINK	
	705GQ793071	D908 ASS'Y	
D908	093G 60269	MBRF2060CT ITO-220AB	
	0M1G 930 8120	SCREW	
HS6	Q90G6263 6	HEAT SINK	
	705GQ793078	D906 ASS'Y	
D906	093G 60238	FCH10A15	
	0M1G1730 8120	SCREW	
HS3	Q90G6263 6	HEAT SINK	
	705GQ851002	OIL FOR DISAPPEAR ASS'Y	
	709G2824 QM001	CONSUMPTIVE ASS'Y	
	055G 2	ALCOHOL	
	055G 23524	WELDING FLUX WITHOUT PB	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
U801	056G 379 22	IC TL494IDR SOIC-16	
U901	056G 379 98	IC LD7552DPS SOP-8	
Q608	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q903	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q811	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q810	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q807	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q803	057G 417 4	PMBS3904/PHILIPS-SMT(04)	

Q607	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q806	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q805	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q809	057G 600 55	P5506 HVG SO-8	
Q804	057G 600 55	P5506 HVG SO-8	
Q808	057G 759 2	RK7002FD5T116 SOT-23 BY ROHM	
Q801	057G 760 4B	PDTA144WK SOT346	
Q802	057G 760 5B	PDTC144WK SOT346	
Q809	057G 763 14	AM9945N	2nd source
Q804	057G 763 14	AM9945N	2nd source
R942	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R926	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R849	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R848	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R827	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R853	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R852	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R808	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R819	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R824	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R831	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R833	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R838	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R840	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R813	061G0603101	RST CHIPR 100 OHM +-5% 1/10W	
R823	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R601	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R602	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R603	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R604	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R605	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R609	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R809	061G0603105	RST CHIPR 1M OHM +-5% 1/10W	
R817	061G0603105	RST CHIPR 1M OHM +-5% 1/10W	
R821	061G0603105	RST CHIPR 1M OHM +-5% 1/10W	
R836	061G0603105	RST CHIPR 1M OHM +-5% 1/10W	
R818	061G0603205	RST CHIPR 2 MOHM +-5% 1/10W	
R847	061G0603220	RST CHIPR 22 OHM +-5% 1/10W	
R846	061G0603220	RST CHIPR 22 OHM +-5% 1/10W	
R845	061G0603220	RST CHIPR 22 OHM +-5% 1/10W	
R844	061G0603220	RST CHIPR 22 OHM +-5% 1/10W	
R930	061G0603243 1F	RST CHIPR 2.43K OHM +-1% 1/10W	
R927	061G0603243 1F	RST CHIPR 2.43K OHM +-1% 1/10W	
R610	061G0603273 Y	RST CHIPR 27KOHM +-5% 1/10W YAGEO	
R612	061G0603362 Y	RST CHIPR 3.6KOHM +-5% 1/10W YAGEO	
R828	061G0603470 2F	RST CHIPR 47 KOHM +-1% 1/10W	
R815	061G0603470 2F	RST CHIPR 47 KOHM +-1% 1/10W	
R842	061G0603470 2F	RST CHIPR 47 KOHM +-1% 1/10W	
R611	061G0603472 Y	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO	
R822	061G0603473	RST CHIPR 47 KOHM +-5% 1/10W	
R607	061G0603562	RST CHIPR 5.6 KOHM +-5% 1/10W	
R606	061G0603562	RST CHIPR 5.6 KOHM +-5% 1/10W	
R820	061G0603564	RST CHIPR 560 KOHM +-5% 1/10W	
R816	061G0603680 2F	RST CHIPR 68K OHM +-1% 1/10W	
R829	061G0603680 2F	RST CHIPR 68K OHM +-1% 1/10W	
R814	061G0603750 2F	RST CHIPR 75KOHM +-1% 1/10W	
R801	061G0805000	RST CHIP MAX 0R05 1/8W	

R804	061G0805000	RST CHIP MAX 0R05 1/8W	
R830	061G0805000	RST CHIP MAX 0R05 1/8W	
R832	061G0805000	RST CHIP MAX 0R05 1/8W	
RJ610	061G0805000	RST CHIP MAX 0R05 1/8W	
R608	061G0805000	RST CHIP MAX 0R05 1/8W	
R806	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R807	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R811	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R812	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R834	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R835	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R839	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R841	061G0805100 1F	RST CHIPR 1K OHM +-1% 1/8W	
R802	061G0805101	1ST CHIPR 100 OHM +-5% 1/8W	
R925	061G0805102	RST CHIPR 1K OHM +-5% 1/8W	
R939	061G0805102	RST CHIPR 1K OHM +-5% 1/8W	
R938	061G0805103	RST CHIPR 10K OHM +-5% 1/8W	
R843	061G0805105	RST CHIPR 1M OHM +-5% 1/8W	
R826	061G0805180 3F	RST CHIPR 180 KOHM +-1% 1/8W	
R924	061G08053300FF	RST CHIPR 330 OHM +-1% 1/8W FENGHUA	
R943	061G0805471	RST CHIPR 470 OHM +-5% 1/8W	
R825	061G0805510 2F	RST CHIPR 51K OHM +-1% 1/8W	
RJ901	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ810	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ808	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ807	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ806	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ805	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ804	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ803	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ802	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ801	061G1206000	RST CHIP MAX 0R05 1/4W	
R910	061G1206100	RST CHIPR 10 OHM +-5% 1/4W	
R918	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R919	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R920	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R935	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R949	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R950	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R951	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R961	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R962	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R902	061G1206105	1M 1206	
R901	061G1206105	1M 1206	
R810	061G1206150	RST CHIPR 15 OHM +-5% 1/4W	
R837	061G1206150	RST CHIPR 15 OHM +-5% 1/4W	
R850	061G1206150	RST CHIPR 15 OHM +-5% 1/4W	
R851	061G1206150	RST CHIPR 15 OHM +-5% 1/4W	
R912	061G1206221	RST CHIPR 220 OHM +-5% 1/4W	
R904	061G1206304	RST CHIPR 300K OHM +-5% 1/4W	
R905	061G1206304	RST CHIPR 300K OHM +-5% 1/4W	
R906	061G1206304	RST CHIPR 300K OHM +-5% 1/4W	
R909	061G1206519	RST CHIPR 5.1 OHM +-5% 1/4W	
C610	065G0603101 31	CER1 0603 NP0 50V 100P PM5 R	
C611	065G0603101 31	CER1 0603 NP0 50V 100P PM5 R	
C932	065G0603102 32	1000PF +-10% 50V X7R	
C804	065G0603104 12	CER2 0603 X7R 16V 100N P	

C807	065G0603104 12	CER2 0603 X7R 16V 100N P	
C814	065G0603104 12	CER2 0603 X7R 16V 100N P	
C613	065G0603104 12	CER2 0603 X7R 16V 100N P	
C612	065G0603104 12	CER2 0603 X7R 16V 100N P	
C810	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	
C806	065G0603105 22	CHIP 1UF 25V X7R 0603	
C802	065G060310512K T	CAP CHIP 0603 1UF K 16V X7R	
C819	065G060310512K T	CAP CHIP 0603 1UF K 16V X7R	
C820	065G060310512K T	CAP CHIP 0603 1UF K 16V X7R	
C813	065G0603222 22	CHIP 2200PF 25V X7R	
C815	065G0603222 22	CHIP 2200PF 25V X7R	
C817	065G0603222 22	CHIP 2200PF 25V X7R	
C818	065G0603222 22	CHIP 2200PF 25V X7R	
C601	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C602	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C603	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C606	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C928	065G0805102 31	CAP CHIP 0805 1000PF J 50V NPO	
C823	065G0805104 22	0.1UF +-10% 25V X7R 080	
C824	065G0805104 22	0.1UF +-10% 25V X7R 080	
C907	065G0805104 32	CAP CHIP 0805 0.1UF K 50V X7R	
C924	065G0805104 32	CAP CHIP 0805 0.1UF K 50V X7R	
C930	065G0805104 32	CAP CHIP 0805 0.1UF K 50V X7R	
C931	065G0805104 32	CAP CHIP 0805 0.1UF K 50V X7R	
C940	065G0805104 32	CAP CHIP 0805 0.1UF K 50V X7R	
C609	065G080510522K T	CAP CHIP 0805 1UF K 25V X7R	
C608	065G080510522K T	CAP CHIP 0805 1UF K 25V X7R	
C822	065G0805152 32	CHIP 1500PF 50V X7R 0805	
C821	065G0805152 32	CHIP 1500PF 50V X7R 0805	
C816	065G0805152 32	CHIP 1500PF 50V X7R 0805	
C803	065G0805152 32	CHIP 1500PF 50V X7R 0805	
C809	065G0805221 31	CAP CHIP 0805 220PF J 50V NPO	
C808	065G0805225 22	CHIP 2.2UF 25V X7R 0805	
C909	065G0805471 21	CAP CHIP 0805 470PF J 25V NPO	
C828	065G0805472 32	CAP CHIP 0805 4700PF K 50V X7R	
C827	065G0805472 32	CAP CHIP 0805 4700PF K 50V X7R	
C910	065G0805473 32	CHIP 0.047UF 50V X7R	
C929	065G1206102 72	CAP CHIP 1206 1000PF K 500V X7R	
C912	065G1206102 72	CAP CHIP 1206 1000PF K 500V X7R	
C935	065G1206102 72	CAP CHIP 1206 1000PF K 500V X7R	
FB902	071G 57G800 B	CHIP BEAD HCB3216KF-800T30 BULLWILL	
D801	093G 64 33	DIO SIG SM BAV99 (PHSE)R	
D802	093G 64 33	DIO SIG SM BAV99 (PHSE)R	
D809	093G 64 33	DIO SIG SM BAV99 (PHSE)R	
D810	093G 64 33	DIO SIG SM BAV99 (PHSE)R	
D806	093G 64 38 D	DIODE BAW56 DIODES	
D808	093G 64 38 D	DIODE BAW56 DIODES	
D803	093G 6432P	LL4148	
D807	093G 6432P	LL4148	
D811	093G 6432P	LL4148	
D812	093G 6432P	LL4148	
D903	093G 6432P	LL4148	
ZD921	093G 39S 12 T	RLZ20B LLDS	
ZD922	093G 39S 24 T	RLZ 5.6B LLDS	
ZD902	093G 39S 44 T	RLZ18B LLDS	
CN901	006G 31500	EYELET	
T901	006G 31502	1.5MM RIVET	

IC904	056G 158 12	KIA431A-AT/P TO-92	
IC904	056G 158504AME	IC AME431BAJATB25Z AME	
R903	061G152M10452T	RST MOFR 100KOHM +-5% 2WS	
R914	061G152M39852T	RST MOFR 0.39 OHM +-5% 2WS	
R946	061G152M47152T	RST MOFR 470 OHM +-5% 2WS	
C906	065G 2K152 1T6213	CAP CER 1500PF K 2KV	
C604	067G215Y1014KT	EC CAP.105℃	
C908	067G215Y2207KT	CAP 105℃ 22UF M 50V KINGNICHI	
C605	067G215Y2207KT	CAP 105℃ 22UF M 50V KINGNICHI	
FB602	071G 55 9 T	FERRITE BEAD	
FB901	071G 55 29	FERRITE BEAD	
FB903	071G 55 29	FERRITE BEAD	
FB904	071G 55 29	FERRITE BEAD	
F901	084G 56 3 B	FUSE 3.15A 250V	
F902	084G 56 3 B	FUSE 3.15A 250V	
F903	084G 56 3 B	FUSE 3.15A 250V	
D900	093G 6026T52T	RECTIFIER DIODE FR107	
D901	093G 6038T52T	FR103	
J823	095G 90 23	JUMPER WIRE	
J822	095G 90 23	JUMPER WIRE	
J821	095G 90 23	JUMPER WIRE	
J820	095G 90 23	JUMPER WIRE	
J819	095G 90 23	JUMPER WIRE	
J818	095G 90 23	JUMPER WIRE	
J817	095G 90 23	JUMPER WIRE	
J816	095G 90 23	JUMPER WIRE	
J815	095G 90 23	JUMPER WIRE	
J814	095G 90 23	JUMPER WIRE	
J813	095G 90 23	JUMPER WIRE	
J812	095G 90 23	JUMPER WIRE	
J811	095G 90 23	JUMPER WIRE	
J810	095G 90 23	JUMPER WIRE	
J809	095G 90 23	JUMPER WIRE	
J807	095G 90 23	JUMPER WIRE	
J606	095G 90 23	JUMPER WIRE	
J605	095G 90 23	JUMPER WIRE	
J604	095G 90 23	JUMPER WIRE	
J603	095G 90 23	JUMPER WIRE	
J602	095G 90 23	JUMPER WIRE	
J601	095G 90 23	JUMPER WIRE	
L906	095G 90 23	JUMPER WIRE	
J915	095G 90 23	JUMPER WIRE	
J912	095G 90 23	JUMPER WIRE	
J911	095G 90 23	JUMPER WIRE	
J910	095G 90 23	JUMPER WIRE	
J907	095G 90 23	JUMPER WIRE	
J906	095G 90 23	JUMPER WIRE	
J905	095G 90 23	JUMPER WIRE	
J904	095G 90 23	JUMPER WIRE	
J903	095G 90 23	JUMPER WIRE	
J902	095G 90 23	JUMPER WIRE	
J901	095G 90 23	JUMPER WIRE	
J806	095G 90 23	JUMPER WIRE	
J804	095G 90 23	JUMPER WIRE	
J803	095G 90 23	JUMPER WIRE	
J802	095G 90 23	JUMPER WIRE	
J801	095G 90 23	JUMPER WIRE	

	709G2824 QA001	CONSUMPTIVE ASS'Y	
	095G 90 23	JUMPER WIRE	
	715G2824 2 2	POWER PCB 160X160X1.6MM FR-1 1OZ	
	709G2824 QS001	CONSUMPTIVE ASS'Y	
	052G 2191 A	PAPER TAPE	
HS1	Q90G6295 3	HEAT SINK	
L901	S73L17440VG	TRANSFORMER ASS'Y	
	S73L17440VG-Z	TRANSFORMER ASS'Y	
T802	S80GL20T510V	TRANSFORMER ASS'Y	
	Q34FPE19P06	CASE EEL19	
T801	S80GL20T510V	TRANSFORMER ASS'Y	
	Q34FPE19P06	CASE EEL19	
T901	S80GL22T3V	XFMR POWER 490UH TPV-PT	
C605	096G 29 8	TUBE	
	Q15G0245801	MAINFRAME L19WA-8Q*	
	Q33G0170ABJ 1L0100	KEY PAD	
	Q33G0171 1 1C0100	LENS	
	Q34G0265ABJ 8B0100	REAR COVER19"	
	Q34G0313AEDF2B0130	BEZEL(L19WA-8Q5)	
	Q40G 19N696 1A	RATING LABEL	
	Q40G000267330A	VISTA LABEL	
	Q44G9123101	EPS_L19WQ	
	Q44G9123201	EPS	
	Q44G9123696 1A	19LCD CASPER CARTON	
	Q45G 88609 88	EPE COVER	
	Q50G 4 10	TIE	
	089G 17356G554	AUDIO CABLE	
	Q41G7800696 2A	19CSPR WARRANTY	
	Q41G9002696 1A	MANUAL	
	Q45G 76 28 RN R	PE BAG MANUAL	
	040G 58162435A	P/N LABEL FOR MANUAL PE BAG	
	040G 581689 4A	BARCODE LABEL FOR 1	
	Q45G 77 5	PE PACKING	